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THE SUPER-SMOKELESS FURNACE

Officially Tested and Approved by Chief City Smoke
Inspector of Cincinnati

City of Cincinnati

"At the smoke test made by members of this department and others, it was demonstrated that it was practically impossible to make the furnace emit dense smoke, although it was being fired with the highest volatile coal which is brought into the City of Cincinnati."

GORDON D. ROWE
Chief Smoke Inspector

EVERY heating man and home owner familiar with the SUPER-SMOKELESS Furnace recommends it most enthusiastically. It actually burns smoke and soot as fuel, requires less coal than usual and has exceptional heating capacity for size of firepot.

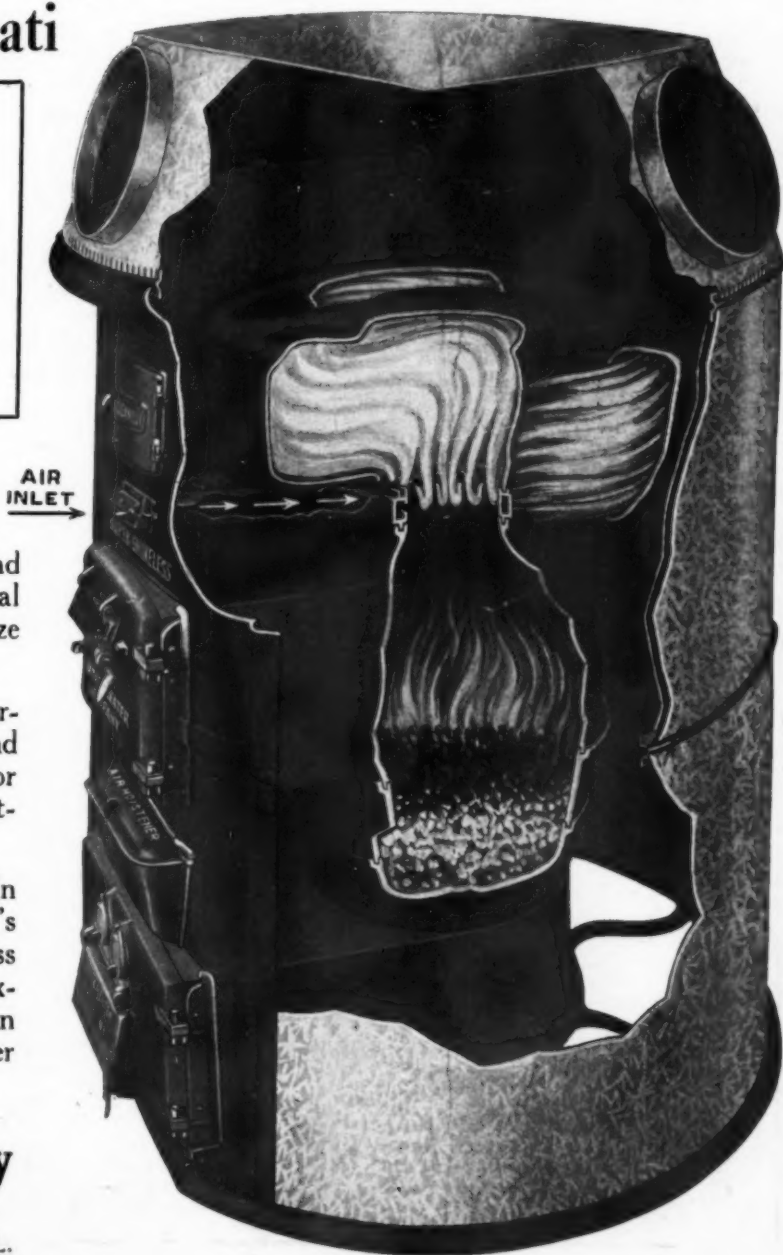
The demand for SUPER-SMOKELESS Furnaces increases with every installation and demonstration. It meets a long-felt need for a clean furnace and is now successfully operating throughout the soft coal sections.

SUPER-SMOKELESS Furnaces are made in all sizes of the Utica Heater Company's SUPERIOR Pipe and NEW IDEA Pipeless Furnaces. They are highly efficient and extremely durable. Experienced heating men should investigate the Super-Smokeless Dealer Proposition in unassigned territories.

Utica Heater Company
UTICA, N. Y.

218-220 West Kinzie Street

CHICAGO, ILL.



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FRONT RANK TRADE NAME REGISTERED STEEL FURNACES

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Founded 1880 by Daniel Stern

Thoroughly Covers
the Hardware, Stove,
Sheet Metal, and
Warm Air Heating and
Ventilating Interests

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CHICAGO, DECEMBER 15, 1923.

\$2.00 Per Year.

BUSINESS IS AS GOOD AS YOU MAKE IT.

Business is as good as you make it!

Business is never better than you make it!

Business is never as good as it ought to be unless you make it so!

This fall has been a fine season for sheet metal and furnace work.

And yet—

Everywhere you can find sheet metal men, furnace installers and furnace manufacturers who will say that "business has been poor," and you will hear of this man and that factory going out of business "because business was poor."

Business is never good for the man who does not look for good business—and it is only good if he does his looking with his feet, his head and his hands, as well as with his eyes.

For it takes real thought, real study, real work—of head and body—to make business.

The late Elbert Hubbard pronounced one of the greatest falsehoods when he gave Ralph Waldo Emerson credit for the story about the man in the wilderness who made a mouse trap and about the beaten path that people would make to buy it from him.

Trade goes where it is invited.

Trade stays where it receives satisfactory treatment.

But trade does not go hunting for people from whom it may buy!

We are speaking of the rule—not of the infinitesimally few exceptions.

And yet—

There are thousands of sheet metal contractors and furnace installers who seem to

think that it is not necessary to hunt for business—for additional business from old customers and for new business from people who have never dealt with them.

And then we have the man who, while he may hunt for business does it on the basis of "Low cheap."

There is just one of three things wrong with that man:

Either he does not know his business well enough to sell his work at a fair profit.

Or he has a piece of soft rubber where his backbone ought to be.

Or he suffers from a combination of the two.

Many a man in the first class may be educated up to the point where he knows his business well enough to realize that an honest job is entitled to honest pay.

But unless at the same time his backbone is examined and treated if necessary—business will never be "good" for him.

The work which it is proposed to have the Educational Research Bureau of the National Warm Air Heating, Ventilating Association do is of such great importance to the entire sheet metal and furnace industry—and indeed, to the general public—that it is to be earnestly hoped and worked for that the Association will set the wheels in motion for the organization of this Bureau and for its proper financing during a period of at least three years.

Business is good in the warm air furnace field this fall.

Let us see that it grows better in 1924!

Random Notes and Sketches.

By Sidney Arnold

I have heard many a tale about the aloofness and exclusiveness of the so-called higher classes in England, but the following story which R. L. McHale, of Lupton's, told me the other day rather takes the prize, and incidentally it also demonstrates the clanniness of the Scotch:

Four separate wrecks had cast up four men on a lonely island of the south seas. There were two Scotchmen and two Englishmen. After several years a passing steamer hove to and took the four aboard. Sandy and Donald found their way to the skipper's cabin and in telling their experiences Sandy said: "It would grieve you, mon, to see the Englishmen. Never a word did they speak all the time they were there; they were not introduced."

"And hoo did ye lads muck oot?" inquired the skipper.

"Aye, mon, the dee I found Donald on the beach we organized a Caledonian society, a golf club and a Presbyterian church."

* * *

Truth is mighty and will prevail!

And, incidentally, Fred L. Nesbit and I are again the same old bosom friends, in spite of the machinations of Harry Hussie and H. Burnison, the Canadian furnace manufacturer.

On the day of the big meeting in Urbana, Illinois, when the National Warm Air Heating & Ventilating Association decided to build an Educational Research Residence, Fred, Harry, "Burnie" and a number of others, including myself, were chatting in the lobby of the Urbana-Lincoln Hotel.

As usual when Harry and Fred are in a crowd, there was a good deal of kidding going on, and a good deal of it at Fred's expense, who took it in his usual good-natured way. Harry, however, made some remark about the temper of his fellow Ak-sar-ben which was not exactly complimentary, so in an effort to soothe Fred's nerves I said that

as the years went by he had improved considerably and that his temper was quite mellow.

"Burnie," however, leaned over to Harry and whispered, "I looked that word up in the dictionary the other day, and it means 'over-ripe, rotten.'"

This was too good to keep, of course, so Harry at once communicated the information to the crowd, and from then on Fred had a hard time, although he was willing to have lunch and dinner with me—not at his expense.

When I arrived at my office on Monday there was an envelope from the Standard, in which a yellow piece of paper was enclosed with these words inscribed and bearing Fred's well-known signature:

Definition of Mellow.

"Soft or tender from ripeness; of wine, well-matured or not harsh; soft, loamy as soil; of sound color, style, etc., not coarse, rough or harsh; *soft, delicate, full and pure*; well matured; made sweet or gentle by maturity."

And Fred was "mellow" enough to add, "*Thanks for the Compliment.*"

So, after all, my reputation as an authority on good English is once more saved, for the quotation is from "Webster's Unabridged."

* * *

There are ways of selling and other ways of selling. Here is a new one that they tell on Jim Doherty, of the Utica Heater Company; who was in a barber shop getting a shave on the lower part of his head, the top being almost innocent of hirsute adornment:

"Yes, sir," said the barber, "my poor brother Jim has been sent to an asylum. He got to broodin' over the hard times, and it finally drove him crazy. He and I worked side by side, and we both brooded a great deal. No money in this business now, you know. Prices too

low. Unless a customer has a shampoo, it doesn't pay to shave or haircut. I caught Jim trying to cut a chap's throat because he declined a shampoo, so I had to have the poor fellow locked up. Makes me sad. Sometimes I feel sorry I didn't let him slash. It would have been our revenge. Shampoo, sir?"

Ralph Blanchard, the Hart & Cooley booster, who was "next," swears that the barber sold the shampoo to Jim.

* * *

"Sometimes we fail to receive thanks for the good deeds we have done, and sometimes we receive thanks from unexpected quarters," said C. F. Beatty, of the New Jersey Zinc Company, the other day, and then he elucidated:

"A very excited young gentleman to see you, sir," announced the butler as he walked softly into the room where the fashionable doctor was busy writing.

"Show him up at once—show him up at once!" said the medico, scenting a fat check in exchange for his advice on a fancied case of nerves.

"When the visitor was ushered in he walked straight over to the doctor and shook him cordially by the hand.

"I have just dropped in to tell you, doctor," he said, enthusiastically, 'how much I have benefited by your treatment.'

"But—er," replied the doctor, somewhat at a loss, 'I don't seem to remember you as a patient of mine.'

"The young man smiled.

"I'm not," he said, 'but my uncle was, and I'm his heir.'"

* * *

A welcome visitor this week was C. H. Schechter, Eastern Sales Manager of the Lennox Furnace Company. Mr. Schechter was on his way to Marshalltown to attend the annual Salesmen's Meeting and reports business exceptionally good. After the first of the year Mr. Schechter will make his headquarters at 1417-21 North Salina Street, Syracuse, New York, where his company has secured a permanent warehousing location.

Here Is the Complete Report of Committee on Publicity and Trade Practices.

Document Submitted by Chairman Wagner to Executive Committee Received Much Favorable Comment.

ON PAGES 14 and 15 of our December 8th issue we quoted the abbreviated report of the Committee on Publicity and Trade Practices, which was read by Evins F. Glore before the National Warm Air Heating & Ventilating Association at its meeting in Urbana, Illinois.

The very complete and lengthy paper from which this report had been condensed was prepared by Dr. John P. Wagner, Chairman of the Committee, and as it contains a great deal of valuable information—both for manufacturers and for installers—we are glad to give it further publicity:

Dr. Wagner's Complete Report as Presented to the Executive Committee.

Pursuant to the text of the resolution adopted at the Tenth Annual Convention to render a report at the Mid-Year Meeting of the National Warm Air Heating and Ventilating Association, your Committee has given careful thought and consideration to the subject of formulating a plan upon which the Bureau could function to the best interests of the industry.

A partial survey was made by your Committee among the manufacturers, jobbers, dealers and installers, and among a goodly number of users of warm air heaters, in order to get a general idea as to the scope which should be given the Bureau in its expression, and in order that a plan may be outlined for the government of the activities of the Bureau that would bring the most practical results in the promotion of the best welfare of the industry.

The manufacturers of furnaces, registers and fittings interviewed voiced the general opinion that the outline of the Bureau's intended activities met with their entire approval and that they would support

such a movement with financial as well as moral support.

The jobbers, likewise, concurred in the opinion of the manufacturers to the proposed activities.

The dealers, without exception, welcomed the idea and strongly urged a closer relation between the manufacturer and the dealer. The users of warm air heating apparatus consulted covered a general variety of users, from the small furnace user to the more extensive installations in the larger homes, schools and churches.

Summing up in a few words the results of our limited survey, it may be said that it met with universal approval.

Your Committee, in a general way, acquainted itself with the results which have been obtained by other industries throughout trade extension and commercial research and educational publicity work, and without exception we find that where research associations covering the commercial activities of an industry have been established, the trade possibilities of such industries have been greatly increased and brought to higher standards, not only in the production of the product, but in the sale and marketing of the same, as well as the maintenance and operation of the commodities manufactured by the various industries.

What Has Been Done In Other Fields.

Among such successful operations, we might mention here the cement, lumber, leather, glass, paint, brass and copper, zinc, furniture, electrical appliances, plumbing and many others. All of these industries have gone into the various phases of trade extension methods, not only covering the promotion of better products, but have found it possible to balance the conduct of the respective industries to such extent that they are now functioning

in a harmonious way to the great profit and advantage of the manufacturer, distributor and user of their products.

Among some of those mentioned, we find that the tremendous advancement in a very short period of time has proved to the members of the association comprising the industry the advisability of expending larger sums of money; that the Bureaus dealing with Trade Extension and Trade Practice have been the avenues through which the solution of many perplexing problems are being daily brought nearer to practical and advantageous solution.

We find that the paint industry has, through its Statistical Department of the Trade Extension Bureau, gathered together facts and figures which makes it possible for each one of the manufacturers to know the potential possibilities and market for his product, and through the gathering of such facts have made it possible to avoid the possibilities of using the wrong kind of materials in places where special or specific kinds of materials were more applicable.

We also found that through their commercial research work they were able to establish better methods of marketing, which involved the elimination of waste and expensive methods which had no potential value. They were able to interest the distributors and dealers in more properly displaying the product and, through the educational department of the Bureau, were able to educate the artisan in its proper application, so that the paint industry has profited to the extent where the slogan "Save the Surface" has become universally known.

Use of Copper More Than Doubled.

In the copper industry, through the research association, they have brought about a wonderful result in a few years of more than doubling the output of their combined products and it is now possible for the members of their association to obtain definite information as to the potential possibilities and market for their output, and they have developed thousands of places where

their products may be used to better advantage.

The lumber industry, through its constant gathering of facts and figures, brought a market for various kinds of lumber which only a few years ago were thought unfit for any other purpose than cord wood, and the most elaborate homes are made artistic through the efforts of the research and trade extension work of that industry.

The cement industry, likewise, has simplified its manufacturing problems since its product must meet requirements of standard specifications, and it is at this time possible to purchase high grade Portland cement from a nearby plant at an economical cost. This industry, through their efforts, and Trade Extension Bureau, have made Portland cement an indispensable product in the industrial and commercial world.

Take a Lesson from the Plumber.

The plumbing industry, with which most of the members of our Association are quite familiar, has made remarkable strides through its Trade Extension Bureau in promoting every phase of its industry to the benefit and advantage of the manufacturer, jobber, distributor, plumber and consuming public.

This is also true of most of the industries who furnish material for the building industry.

Perhaps one of the most remarkable happenings in the direction of trade extension effort is demonstrated by the furniture industry. The original purpose of its efforts were intended to lead them into a better condition pertaining to their individual industry, and yet in the midst of their campaign to promote the manufacture and use of higher class furniture, this industry was called upon to extend their activities into what is known as the "Better Homes" movement, which has already done more than any other movement at a critical time to call attention to the necessity for better and more livable houses, where comfort and happiness builds its shrine called "home."

This great movement of "Better

Homes" has been taken up by our national government to augment and intensify the movement, and we now find that "Better Homes" exhibits are staged all over this country and the attendance at these exhibits outnumber those of any other industrial exhibits. These are a wonderful educational inspiration to the public and are doing more to cultivate higher standards of home building and surroundings and for elevating the social and moral condition for the people of this country.

Our industry needs to occupy a more active and advancing position in augmenting the comfort and happiness of the inmates of the home, and it is quite evident that there is a



Dr. John P. Wagner, Chairman.

great necessity to promote a deeper interest in the minds of the builders of homes, that greater attention must be paid to the heating and ventilating of the home.

Architects and Builders Must Be Informed.

The architect, the builder and the consumer must, through educational advancement, be given a better understanding of the necessity of giving the heating and ventilating of the home more consideration, or at least as much as the plumbing, electric wiring, and the other component parts of the home, since it is a fact that the heating and ventilating of a home is the most essential factor in the health, comfort and happiness to the occupants of the home,

and our conclusions lead us to say that it is up to the manufacturers who are members of our Association to take the initiative in promoting better warm air heating and ventilating through concerted effort that will lead to the zealous safeguarding of the high place which our industry should occupy in its vast field concerning the well being of the family circle, thereby establishing a recognition of the high standard for which our industry stands when its seal of approval is affixed to this essential element.

We are convinced that if our Association establishes a Bureau with a sufficiently wide scope embracing the demand made upon us as an industry, taking in all of the essential activities to bring about the high standards to which we aspire, and profits by the advancement already made by other industries, we will thereby occupy a place in the industrial world enabling us to more efficiently meet the urgent demand for better warm air heating and ventilating conditions and augment the very excellent research work that has been carried on by this Association in the University of Illinois, and which has been given extensive publicity through our trade journals. Also to extend the knowledge of the importance of this work through the various avenues between the manufacturer and the consumer and to extend our industry into fields in which warm air furnace heating is scarcely known, and intensify the sale and distribution of the product of our industry generally.

What Our Bureau Must Do.

It, therefore, seems desirable that the work of your Bureau shall be conducted upon the basis of operating in strict accord and harmony with the principles of the Association and that its aim shall be to so conduct its affairs that it may be justly termed the "Clearing House and Melting Pot" of the common interests of all of the activities of the industry and through the commercial research survey, secure desirable statistics; that it shall stimulate competition among its member com-

panies, at all times respecting their individual rights, and to intensify coöperative activities in the promotion of better business, ethics and marketing methods; to work in close harmony with the distributor and dealer; to circularize, through various media, educational publicity to the distributor, dealer and consuming public, covering every phase of the knowledge of proper sales methods to the dealer, and to instruct the consumers in the proper selection of warm air heating plants for their home and educate them in the maintenance and care of same; to issue such literature that will set forth the general application of the best practice and methods of warm air heating and ventilating systems, and to employ such practical methods and means that will promote the best interests of the industry.

Activities of the Bureau.

Your Committee has, therefore, reached the following conclusions and recommends that the name of the Bureau be simplified to and be known as "Educational Research Bureau of the National Warm Air Heating and Ventilating Association," the Bureau to be divided into three group activities, namely:

I. Manufacturer:

- (a) Commercial Research & Survey;
- (b) Trade Statistics;
- (c) Trade Sales Promotion;
- (d) Competitive Stimulation;
- (e) Improvement of Business Ethics and Marketing Conditions;
- (f) Standardization of Products and Methods;
- (g) Educational Advertising Publicity.

II. Dealer:

- (a) Educational Propaganda Promoting Better Merchandising and Service;
- (b) Proper Display of Merchandise and Local Advertising;
- (c) Competent Sales Methods;
- (d) Adherence to Installation in Accordance with Furnace Code.

III. Consumer:

- (a) Educational Propaganda Dealing with Advantages of

Warm Air Heating and Ventilating;

- (b) How to Select the Proper Heating Plant;
- (c) Education in Maintenance and Care of Warm Air Heating Plants;
- (d) Data on Fuel Values.

The subdivisions above outlined may be changed as occasions may demand.

The Bureau shall also function as a Bureau of Information and be in position to give authentic information to each of the groups, and shall engage in every way possible in such activities as will promote the best interests of the industry.

The Bureau shall use the present slogan of the Association, "Health Heat," or other slogan that may be adopted, and the use of the same when displayed by the manufacturer, distributor, dealer or installer, shall only be permissible when the conduct of such persons or firms is in full accordance with the policies and principles of the National Warm Air Heating and Ventilating Association.

We recommend that the Bureau be provided with proper headquarters in one of the large cities most centrally located, in which it may operate most efficiently and economically, and that a qualified person be engaged as director or manager of the Bureau, who shall be given full charge or management of the affairs of the Bureau, under the direction of the Executive Committee, and vested with the power to engage competent help for the proper conduct of the Bureau's activities.

Such director or manager shall be free from any active connection with the manufacture of or the distribution of products of the industry or competitive products, which rule shall also apply to all employees of the Bureau.

How Bureau May Be Financed.

We further recommend that the financing of the Bureau shall be based upon some definite plan covering a period of three years, or preferably five years, and that the total amount to be raised for the three

years' period shall not be less than \$150,000, and that the sum of not less than \$35,000 shall be available for the use of the Bureau in 1924, and that such funds shall be raised from among the member companies of the Association and that pledges shall also be secured from dealer members. The contributing members of member companies of the Association shall select three of their number to constitute a Special Committee for the securing and disbursement of the funds for the conduct of the Educational Research Bureau.

Another plan which may be advisable is that of the plan adopted and under which the "Save the Surface Campaign" of the National Paint Manufacturers' Association operates, which may be modified to suit our requirements, copy of which is hereto attached.

Your Committee is of the opinion that if the Bureau is founded upon the principles and policies herein outlined, our Association will be able to substantially increase and augment its membership activity and that the industry will enjoy the rapid increase of the sale and use of its products, and will be a vital factor in the standardization of laws and regulations for the proper installation of warm air heating systems, and that it will have the undivided support of the institutions that are now active in the promotion of better heating, and the public will welcome the constructive work of our Association in giving it a medium through which it may become properly divided in the benefits and advantages of warm air heating and ventilating.

Coöperating with Sheet Metal Bodies.

Your Committee further recommends that due consideration be given at this time to invite the various Sheet Metal Associations, manufacturers', jobbers' and contractors', to participate jointly in the Bureau's activities, and that a Sheet Metal Section be added. We are prompted to make this suggestion owing to the fact that the sheet metal contractor is vitally interested in the final sale and installation of the warm air furnace, and much de-

depends upon the coöperation which exists between the manufacturer, distributor and sheet metal contractor and installer as to the proper functioning of a warm air heating and ventilating plant. The closest relation and coöperation should exist between the manufacturers and the sheet metal contractor and installer of furnaces to insure the highest type of installation of warm air heating systems.

It is our opinion that such a combination would materially aid in creating greater activities along coöperative and harmonious lines, and that action should be taken at this meeting to develop ways and means by which such relations may be effected.

Your Committee has received a number of encouraging suggestions from sheet metal contractors who have been thinking along the same line, realizing that their industry is in need of a Trade Extension Bureau, and since a great part of their work is connected with the installation of furnaces, we believe that their relations with our industry are so closely allied that the greatest possible benefit can be accomplished by coöperative effort.

Your Committee further desires to express its deep appreciation to those who have been interviewed for the very splendid coöperation that they have given us, and we especially commend the excellent support and service which the Trade Journals have given this movement, and we respectfully submit this report with the sincere hope that it will meet with the full approval of this meeting and that the same be adopted.

Extract from Recent Report of "What the Save the Surface Campaign Is and Does."

"Financial Support:

"In 1919 one hundred manufacturers provided a fund of \$100,000. In four years' time this income has increase to approximately \$200,000 annually. Each unit of the trade is asked to contribute on an equitable basis. The manufacturer is asked to invest one-eighth of one per cent of his annual sales in the United States. For firms who are not will-

ing to give actual figures showing sales, a classification basis is offered, which yields approximately the same results. The wholesaler or jobber is asked to invest one twenty-fifth of one per cent of his total sales of products used in painting and varnishing. No investment contracts are accepted from manufacturers or jobbers for less than a five-year period. Dealers are asked to invest \$5.00 for each \$2,500 worth of sales of paint and varnish products; master painters, \$1.00 or more; and salesmen, \$1.00.

"In case a local coöperative 'Save the Surface' Campaign is conducted in any city, the money paid by dealers and master painters in that city to the National Campaign is refunded to the local committee, in accordance with the policy of encouraging the painters and dealers to finance local campaigns without the help of manufacturers and jobbers, who are the main support of the National Campaign activities."

As stated in our December 8th issue, the abbreviated report was adopted and a special committee was appointed, to work in conjunction with the Committee on Publicity and Trade Practices, for the purpose of devising means for support and also for definitely outlining the activities of the Educational Research Bureau.

A report is to be rendered by this special committee, which is composed of Evins F. Glore, of Abram Cox Stove Company; D. Rait Richardson, of Richardson & Boynton Company, and G. L. Bridge, of Bridge & Beach Manufacturing Company, to the Annual Convention of the Association, which will be held in April.

Is a Large Furnace More Efficient Than a Small One?

Here is a query which some Heating Engineer can answer for a brother subscriber. This subscriber, no doubt, meant to ask whether it were not better policy to install a furnace of a greater capacity than that actually required by calculation so as to be on the safe side, but we

give it out as he sent it to us, as follows:

TO AMERICAN ARTISAN:

Which is more efficient, a large furnace or a small one? Why?

SUBSCRIBER.

Doc. Weatherly Says That Poor Furnace Work May Prove Very Expensive for Customer.

Charles S. (Doc) Weatherly, the furnace doctor of Grand Rapids, Michigan, ran an advertisement about the danger of asphyxiation from leaky furnaces, and the following "reply" was published in one of the local papers:

Fired at Random.

Thirty Dollars' Worth of Anguish.

A local dealer in furnaces has issued a pamphlet regarding asphyxiation from leaky heaters. He says if a man returns and finds his wife asphyxiated the expense of his negligence in failing to have the furnace repaired will be as follows:

Funeral expense	\$140.00
Loss of time (four days) ..	12.00
Preacher	5.00
Singers	5.00
Anguish of mind	30.00

Total\$192.00

The \$30.00 worth of anguish will at once call to mind the increased cost of living and other unpleasant subjects. It is not possible to get so much anguish for \$30.00 as it used to be and the market quotation on anguish is liable to keep right on rising. After all is said and done, it seems that \$30.00 for anguish is a bit too conservative. Other items of expense in the pamphlet follow:

Housekeeper's salary (six months)	\$120.00
Cost of courting wife Number 2	100.00
Wedding trip for new wife ..	150.00

The grand total foots up to \$682.00, while a new furnace costs only \$175.00. A new furnace is thus \$507.00 cheaper than a new wife. Although it is a very frank, business-like proposition, there is \$30.00 worth of sentiment mixed up in the thing which sort of takes the curse off, as it was never supposed

that there was that amount of sentiment in the furnace business. The pamphlet is certainly interesting and instructive.

Don't Convert Pipeless to Heating Plant, Longley Advises Rose.

The problem of heating a bathroom with a pipeless furnace submitted for solution by C. B. Rose, —, Missouri, in our December 1st issue, page 19, has set the "think tanks" of furnace men from many parts of the country to work.

Lew Longley, —, Minnesota, writes as follows in regard to the solution:

TO AMERICAN ARTISAN:

In regard to the failure of C. B. Rose to heat the bathroom, as stated

in your issue of December 1, page 19, will say that his informant was right in telling him that the return air in a pipeless furnace would not interfere with the flow of warm air in his pipe.

Our opinion is that cold air descending in a pipeless furnace is retarded far more than the air would be in passing upward at an angle of one inch to the foot, which rise would give the best furnace in the market a black eye.

If Brother Rose wishes to profit by the experience of one who has been in the warm air heating business for 39 years, he will never again attempt to convert a pipeless furnace into a heating plant.

It can't be done, Rosie.

LEW LONGLEY.

—, Minnesota.

A room with proper humidity of air—not less than 30 per cent—will be more comfortable and healthful at a low temperature than one where the moisture content is too low. The humidifying equipment usually available is grossly inadequate. For instance, with zero temperature of intake air, to maintain 40 per cent relative humidity, with the room temperature at 70 degrees and an intake of 9,000 cubic feet of air an hour, it would be necessary to evaporate about one-half gallon of water an hour. About 18,000 cubic feet of fresh air a person an hour is necessary.

"One complete change of air an hour is adequate for a living room that is not crowded. That amount may leak in around windows and doors and through walls on a cold day. On very windy days the leakage may be five times as great."

Proper Ventilation and Humidity Help to Prevent Respiratory Diseases of Mankind.

Death Rate of These Diseases Far Higher in Season of Year When Homes Must Be Heated.

THE following article from the pen of Dr. W. A. Evans, former Commissioner of Health of Chicago, has some interesting points as to ventilation. While some of the statements are not in accordance with the facts—especially the remark about houses heated with "hot air" furnaces—there is much that the warm air furnace installer can make use of:

Ventilating to Avoid Colds.

About one-third of the deaths in this country are due to respiratory diseases. The death rate collectively from bronchitis, tonsillitis, influenza and pneumonia is on the increase, and these, with coryza (common colds) and catarrh, are the most deadly forms of communicable disease in the United States. In the last fifty years practically all other forms of bacterially caused diseases have been brought under control, while the respiratory diseases have increased. Pneumonia is one-third more frequent in urban than in rural districts.

The seasonal cycle of pneumonia

where house heating is necessary is startling. Of the total annual deaths, about 40 per cent occur during the winter months, 24 per cent during each of the spring and autumn quarters, and 10 per cent during the summer. That is, the highest death rate occurs during the heating season. This is believed to be due to lowering of vitality on account of improper heating and ventilation.

These statements are extracted from a bulletin on the correct use of different fuels written by S. S. Wyer. Other statements by Wyer follow:

"Most houses are kept too warm. Houses can be kept at 62 to 68 degrees without any discomfort or any danger to health. Keeping the house temperature lower is the easiest way to save fuel. About 25 per cent of the fuel burned is needed to raise the house temperature from 60 to 70 degrees.

"In most houses, especially where hot air furnaces are used, the room is too dry for health and comfort.

W. J. Hennesy Sees Three Possible Evils Which Could Cause Difficulty for Mr. Rose.

C. B. Rose, —, Missouri, who submitted a problem in heating a bathroom in our December 1st issue, certainly should be able to find a solution to his problem and no doubt has by this time, but W. J. Hennesy, —, Nebraska, submits a solution as follows:

TO AMERICAN ARTISAN:

In regard to C. B. Rose's trouble with the booster on the pipeless furnace, probably one of three things is causing the trouble.

To carry heat, the booster or cone must fit down on the radiator tight; even a very small space sometimes made when the pipe through the casing is hooked up will cause the heat to go around it. Next, it must cover the opening in the horseshoe radiator completely, otherwise the heat that should go through the sneak pipe will escape from the cone around the edge.

It is possible, judging from his sketch, that he has taken his collar out of the booster cap too low down; that is, too near to the bottom. It should be taken out about four inches from the top of the cone.

There is just one other possible cause for his trouble and that is that the bathroom door fits so close to the floor that cold air can not get out of the room when the door is closed.

Sometimes when a job is first put in a sneak pipe will not carry heat until you cover the warm air part of the duplex register with a sheet of metal and force heat through the

sneak, but once circulation is started, it will heat from that time without difficulty.

Some one of these conditions is responsible for the booster not working, and I feel sure that if Mr. Rose will check them over he will find the trouble.

Sincerely,

W. J. HENNESY.

—, Nebraska.

Murray Says That It Is An Ill Fire That He Cannot Make Use Of in Selling His Furnace.

Oakland, California, Furnace Installer Makes Good Use of Steel Furnace Left Unhurt After Great Fire.

IN OAKLAND, California, there is a warm air furnace installer who is "on the job."

His name is H. A. Murray, of Murray & Company, 226-230 Webster Street, Oakland.

Mr. Murray believes that warm air furnaces are just what is needed to counteract that chilly atmosphere which is supposed to be the only thing that worries the people of the Golden State after sundown, and incidentally, he is thoroughly convinced that a steel furnace, made of

good material and properly put together, is the only kind of furnace he wants to sell.

Furthermore, as additional evidence of his wide-awakeness, we show an advertisement which he ran recently in the Oakland newspapers.

Most of you have read about the disastrous fire that destroyed a large portion of the city of Berkeley, where the State University is located, and that advertisement was run right after the fire.

Here is what Mr. Murray says:



Ready to Be Put Back on the Regular Heating Job.

"Not long ago you most likely read in the papers of the \$10,000,000 fire in Berkeley. Well, we had just one American furnace in all that devastated area. It was in the home of Professor E. A. Lee in Le Roy Avenue. This was a real hot fire. Fireproof homes made of brick crumpled, iron fused together and dishes burned together. In fact, the devastated area resembled a grave-

Boiler Plate Furnaces Don't Crack!



All that remains of Prof. E. A. Lee's Home
1562 Le Roy Ave., Berkeley, Cal.

Represented by
ROY O. LONG COMPANY
REAL ESTATE INVESTMENTS
PROPERTY MANAGEMENT
214 Market Street
Berkeley, Cal.
October 28, 1923.

H. A. Murray Co.,
226 Webster Street,
Oakland, Calif.

Sir:—This is to advise that the American Riveted Steel Furnace that was placed in Prof. E. A. Lee's home last year by you, went through the fire with very little damage. Nearly all of the house fell in on the furnace burning it completely. When the property was finally cleaned off it was found that the riveted steel frame was in perfect condition, except for re-arranging the joints. The exterior casing was the only part that was really damaged. This will mean quite a saving to Prof. Lee in re-establishing his residence. We are authorizing you to get the furnace from the ruins, and proceed to get it ready for the new house.

This certainly speaks well for the American Furnace, than we have seen elsewhere of other makes throughout the burned district. It is a pleasure to know that we specified the American Furnace in Prof. Lee's home, and rest assured that we shall specify them in the future.

Prof. Lee's home was designed and built by this company, and we are to proceed re-building his home at once.

Yours very truly,
William K. Long,
Architectural Designer.

W.K.S. D.S.

MURRAY & CO.

Heating Specialists

226-230 Webster St.

Oakland, Cal.

"We co-operate with the Architects"

A Monument to Good Work.

yard, nothing standing but chimneys.

"In the home of Professor Lee, the dishes Mrs. Lee was washing when she left for a safer territory were fused together.

"Immediately after the fire Professor Lee began plans for building. He was going to replace everything in the house with the same goods that were there before the fire, including the American furnace.

When they began to remove the debris, we were called to look at the furnace and submit a bid on replacing it. Well, the only thing gone about the American furnace is the casing. It is not going to be re-



It Is an Ill Fire that Does Not Do Some Good for Someone.

placed, but is going to be used again. It is the only furnace in the whole devastated area that is standing and in condition to be used again. To prove our story, we are sending, under separate cover, photographs of the furnace."

Many Furnace Manufacturers Will Have Exhibits at Philadelphia During Hardware Convention

Among the manufacturers of warm air furnaces and ventilating equipment, who will have exhibits during the great "Pasha" hardware convention in Philadelphia, February 12 to 15, 1924, are the following:

Cooperative Foundry Company, Rochester, New York.

The Albert Dickinson Company, Chicago.

Hall-Neal Furnace Company, Indianapolis.

Haynes-Langenberg Manufacturing Company, St. Louis.

W. E. Lamneck Company, Columbus, Ohio.

Lennox Furnace Company, Marshalltown, Iowa.

Mueller Furnace Company, Milwaukee.

Be an Exponent of Better Heating in Your Town.

It should be the desire of every dealer who handles warm air furnaces to be an exponent of better heating in his community. He should become known as the dependable furnace man of his town, referred to as being efficient in his workmanship and fair in his dealings—interested in the comfort and health of his community.

Swager Tells Rose to Use Larger Register.

Here is still another answer to the unique problem in heating that C. B. Rose, —, Missouri, submitted for solution in our issue of December 1, page 19.

B. J. Swager, —, Indiana, writes as follows:

TO AMERICAN ARTISAN:

I am sending a rough sketch of what I call a positive, and I have found this very helpful in taking off a lead from a pipeless or a one-

register; a 9-inch pipe will answer, and he should use 30 or 45 elbows if possible.

If the furnace is a large one, he can even make his positive larger than 16 or 18 inches on the bottom; this positive should be as close to the radiator as possible. I have found that this method will work about nine times out of ten. I hope this will be of help to Mr. Rose.

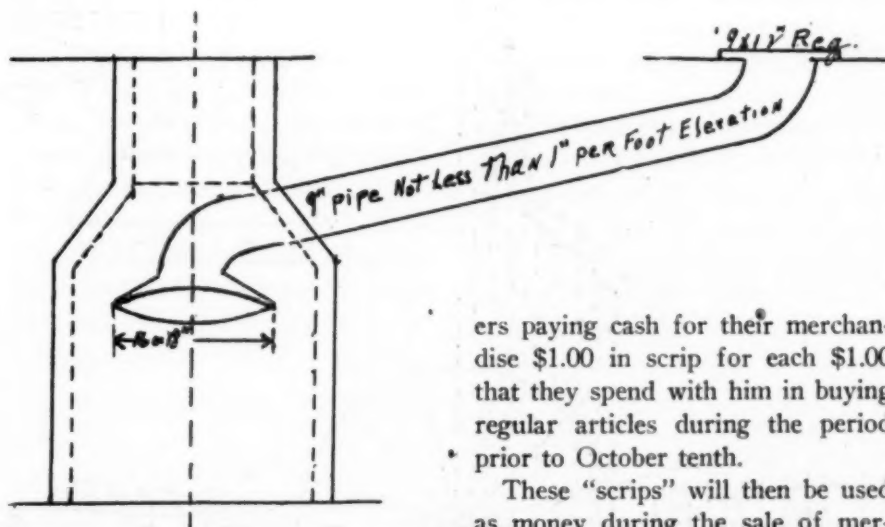
B. J. SWAGER,

—, Indiana, December 7, 1923.

Here Is a New Stunt That Is Likely to Increase Business.

The merchants in Columbus, Nebraska, with the coöperation of the Chamber of Commerce, are planning a "fun auction" to be held in Franklin square, October tenth. At this auction one automobile of some standard make will be sold along with \$1,000 worth of merchandise offered by Columbus merchants.

Each merchant of the first forty to enter their names with the Chamber of Commerce pays \$15 in cash toward the automobile and an equal amount of merchandise to be selected at invoices by the committee. For this donation each merchant will receive \$3,000 in Columbus "wampum" or "scrip." He will in turn give each one of his custom-



Swager's Arrangement.

register furnace to the bath room. C. B. Rose, —, Missouri, does not say how long his pipe is, but if it is not too long, I think he will get results if he will use a larger

ers paying cash for their merchandise \$1.00 in scrip for each \$1.00 that they spend with him in buying regular articles during the period prior to October tenth.

These "scrips" will then be used as money during the sale of merchandise and the auctioning off of the car October 10. The man who can bid the most "wampum" or "scrip" will get the car and the others can bid their "scrip" on the articles of merchandise offered for sale.

Floor Lamp and Bric-a-Brac Patterns Developed Similar to Those for Cornice Problems.

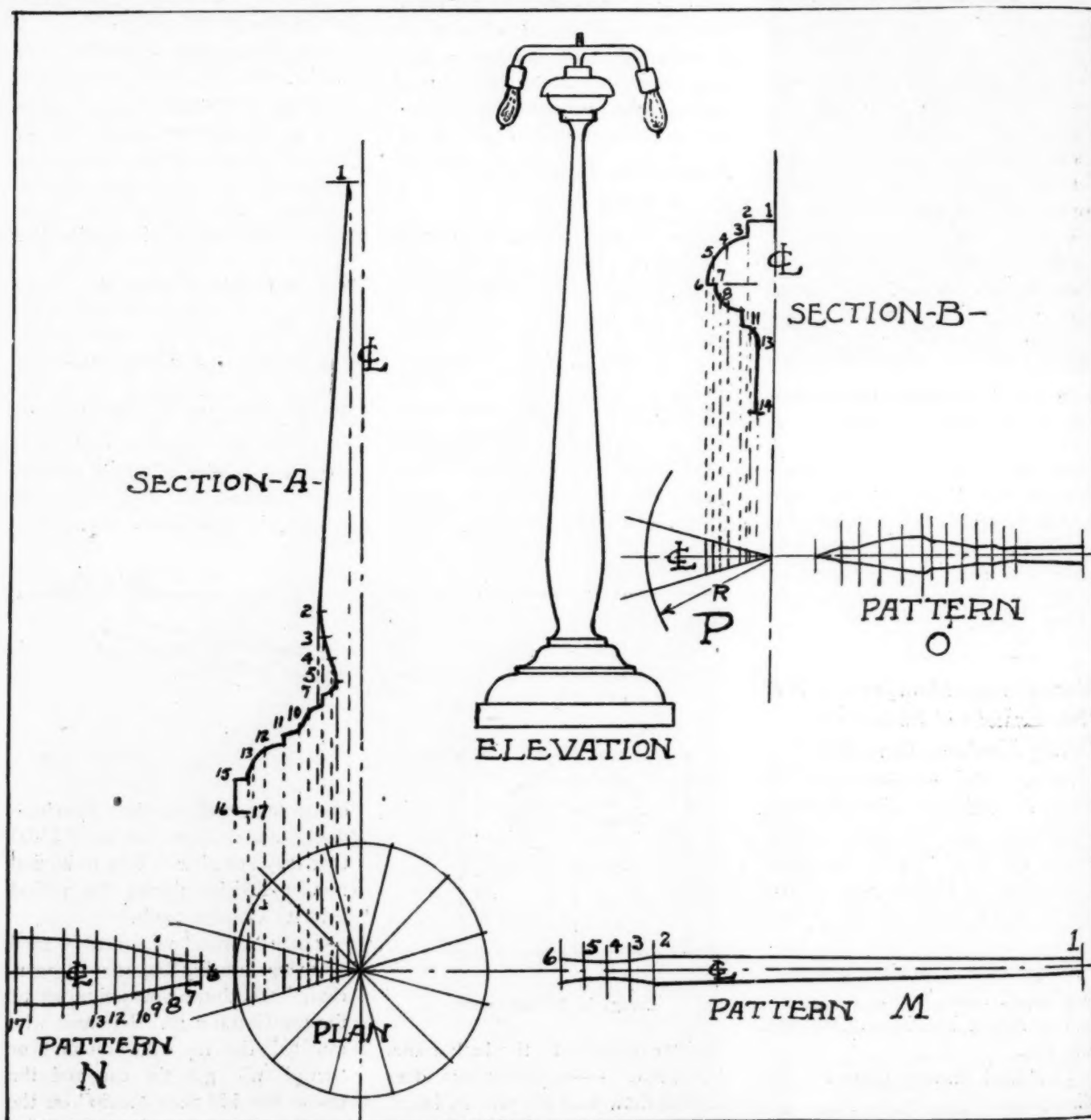
Kothe Illustrates Method of Making Working Drawing of Floor Lamp in Answer to Query of Stoffel Brothers, Lebanon, Illinois.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

REPLYING to the inquiry of Stoffel Brothers, Lebanon, Illinois, for pattern for a floor lamp, will say the development of such bric-a-bracs is the same as cornice

problems, the making of urns, finils, etc. The accompanying design shows one scheme of things, and the design can be made in a multitude of shapes and methods.

A lamp with square, sharp corners may be one way, and for this design it might look fairly well, and save a world of work. However, most men would want to make them



Working Drawing for Metal Floor Lamp.

with slightly chamfered corners, having possibly twelve to sixteen corners. This enables the stem to be made in one piece and to be broken up on the brake.

The first step is to draw the center line and detail section A to any design you wish, and then somewhere pass a horizontal center line from which to develop the plan. Use the intersection of the two center lines, and strike a circle, any size, or as large as the base as in this case, and divide in as many spaces as you want gore pieces in the lamp. In this case we have twelve gore pieces, and we draw miter lines from the center as shown. After this we drop lines from each point in section A, to cross the horizontal gore with center line, which gives the width of lines in plan to cut those in pattern. So to set out the pattern we merely pick the girth from section A as from 1 to 6 and set it in numerical order on the horizontal center line as 1-6 and draw vertical lines through these points. Then from each point in the miter lines of plan covering lines 1 to 6 bring over horizontal lines, thus cutting those lines in stretchout of similar number. This gives the intersections for drawing the miter lines of pattern.

The base is developed in the same way, picking the girth from 6 to 17 of section A and setting it as in pattern N, and then develop the points the same as any angle miter. The top cap or crown mould B is developed in the same way; the part plan is transferred with radius R, and places at P, and from which pattern O is developed.

Workmen who are acquainted with spinning metal should be able to make a fine job where all parts are cylindrical in section. In the same way, workmen who can hammer copper can also make a right respectable job in hammering out the various parts.

Folks not so well experienced may make several of them before a satisfactory job is achieved. The metal, whether made of galvanized iron, automobile plate, or zinc, should be coated with shellac, and if the lamp is then painted and

rubbed down several times, a right nice piece of furniture can be made. Where soldering is done, it should be either soldered on the inside or sweated in from the outside and scraped off, thus leaving a smooth, clean surface.

Landis Award Here to Stay—Says Citizens' Committee to Enforce it.

Superintendents and foremen employed on Landis award structures in Chicago, numbering more than 400, were assured recently, at a luncheon tendered them by the employing contractors, that the principles of the Landis award were here to stay, and that the unscrupulous labor leader never again would dictate how building should be con-

ducted in this city. T. E. Donnelley, Chairman of the Citizens' Committee to Enforce the Landis Award; James A. Patten and others identified with the organized movement to keep the building industry clean, told the men that decency henceforth would prevail in the building industry.

"The open shop movement is on for good," said Mr. Donnelley. "The results of the two years in which the Citizens' Committee has been functioning have convinced us that this fight for a clean building industry can be won and stay won. The public at last is convinced that we can make good on our effort to rid the industry of the rottenness with which it has been infested, and it is giving us wholehearted support and encouragement."

Michigan Sheet Metal & Roofing Contractors Create Architectural Service Board.

Forty-One Members Attend Chicken Dinner December 10—Secretary Ederle Talks on Value of Association Membership

A NEW board has been created by State President A. S. Albright, of the Michigan Sheet Metal & Roofing Contractors' Association. This board consists of seven members and is known as the Architectural Service Board. Its duties will be to furnish architects with information concerning difficult sheet metal problems, to recommend proper material and to adopt standard specifications.

The present board, which held its first meeting in Detroit on Monday, December 10th, is composed of the following-named men:

Chris Young, Detroit, Chairman.
F. E. Ederle, Grand Rapids, Secretary.
A. S. Albright, Flint.
Lon Shouldice, Battle Creek.
Frank Daly, Jackson.
James Vander Waals, Grand Rapids.
Louis Oehring, Detroit.

It is hoped that by the encouragement of the use of better material,

and the adoption of proper construction methods, to increase the value of sheet metal work, thereby causing more of it to be used.

The regular monthly meeting of the Detroit Sheet Metal & Roofing Contractors' Association was held on Monday night, December 10th, at the Board of Commerce. The meeting followed a splendid chicken dinner, which added considerable enthusiasm to the forty-one members present.

F. E. Ederle, State Secretary, gave a talk on the "Value of an Association Membership." His talk brought out plainly the advantages of the Association's educational program. He also spoke of the future values which would be realized through the completion of a program now being outlined by the State Association to increase the use of sheet metal work.

Louis Oehring gave an interesting talk on "Figuring Costs to Make Profits." He convinced his audience of the necessity for cost ac-

counting and the proper distribution of overhead expense.

Secretary D. M. Marshall outlined a definite program which he suggested the Association adopt and then in the future to work along a fixed policy instead of jumping from one thing to another. His suggestion was well received and a committee, composed of William Bush, William Sullivan and Chris Young, was appointed to work out such a program.

Altogether the meeting was one of the most interesting and constructive ever held by the organization.

Special Meeting of Salesmen's Auxiliary Pennsylvania Sheet Metal Men, December 22.

A special meeting and luncheon of the Salesmen's Auxiliary of the Sheet Metal Contractors' Association of Pennsylvania will be held Saturday, December 22, 1923, at 1:30 p. m., at the Hotel Aldine, Philadelphia.

OLIVER C. BROOKS, Secretary,
2138 North 19th Street, Philadelphia.

Convention of Indiana Sheet Metal Contractors to Be Held Indianapolis, January 29 and 30.

The Convention Committee of the Sheet Metal Contractors' Association of Indiana, of which Joseph E. Mattingly, President of the Sheet Metal Contractors of Indianapolis, is Chairman, announces the convention dates for the Fourth Annual Convention of the Indiana organization to be set for January 29 and 30, 1924. The headquarters of the convention and the sessions will be held at the Hotel Severin, Indianapolis.

The program has not been definitely decided; however, the registration will start at 4:00 p. m. on the afternoon of January 29th and the opening session will be held at 7:30 p. m. of the same date on the twelfth floor of the building mentioned heretofore.

The Convention Committee also desires to state that the hotel rates

are as follows: For rooms with bath, \$2.50, \$3.00, \$3.50, \$4.00, \$5.00 and \$6.00.

The convention is being held on the same dates as that of the Indiana Hardware Dealers' Association convention and the members attending our convention will have the privilege of attending the Hardware Exhibits, which will be held in connection with the Hardware Men's convention. On Wednesday we will

have a full day's session and the meeting will close with the annual banquet, the location of same to be decided upon in the next few days.

As soon as the program is arranged, copies will be supplied. In the meantime the Committee is open for suggestions in connection with the program.

Joseph Gardner and W. S. Waters are also serving on the Convention Committee.

Chairman Stark, St. Louis, Submits Final Report of 1923 National Convention Committee.

Forty Per Cent of Donations Prorated Back to Donor, Leaving Balance of \$187.36 to Go to the Two St. Louis Associations.

THE members of the St. Louis Sheet Metal Contractors' Association and the St. Louis Sheet Metal Consumers' Protective Association will find the report of the National Committee of 1923, which appears below, interesting reading.

This committee, Chairman Henry Stark announces, has been at labor since June, 1922, and is now in a position to close and submit its report.

The report follows:

The committee wishes to thank the donors and all who have had any connection with this Convention for their loyal support and assistance in helping elevate the cause and upbuilding of our trade.

On Tuesday evening, December 4, 1923, the St. Louis Sheet Metal Contractors' Convention Committee held its final meeting, and makes the report as follows:

We believe, from the tone of the many letters received and the expressions of all we had the pleasure of meeting, that all enjoyed a fine business session and also plenty of entertainment.

Through the strict economy and untiring efforts, and owing to the fact that your committee members paid their own expenses and furnished their time gratis, we have been able to pro-rate 40 per cent of each donation back to the donor.

Attended the Convention, 545.

Report of the finances is as follows:

Total donations	\$5,838.00
From all other sources...	734.58

Total receipts	\$6,572.58
General expense	4,050.02

\$2,522.56

Forty per cent pro-rated back to donor.....	2,335.20
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Balance	\$ 187.36
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Balance divided and placed in the treasuries of the two St. Louis Associations, to take care of whatever bills may still arise, \$93.68 each.

Respectfully submitted by
HENRY STARK, President.
L. R. SCHLEIER,
Recording Secretary.

Ohio Salesmen's Auxiliary Roster Now Off Press.

The roster containing the member names of the Jobbers' and Salesmen's Auxiliary to the Sheet Metal Contractors' Association of Ohio is now in print.

The roster is 12x15 inches, and the names of members and the firms they represent are printed in heavy type.

R. L. Shugg, 1402 Union Trust Building, Cincinnati, Ohio, is the Secretary of the Sheet Metal Contractors' Association of Ohio.

Here Is a Good Example for Other Sheet Metal Contractors to Follow For Good Results.

Jackson, Michigan Contractors Have Arranged for Course in Sheet Metal Work in Public School.

THROUGH the efforts and with the coöperation of the Sheet Metal Contractors' Association of Jackson, Michigan, a course has

been arranged in the West Intermediate School of Jackson for boys who expect to become sheet metal workers.

The course comprises pattern drafting, cutting, soldering, forming, grooving, riveting, burring, beading and other means of shaping sheet metal, as well as cornice and miter construction, triangulation, elbow making and blow pipe and ventilation work.

The chart herewith gives a graphic idea of the scope of the course.

Foot Note. — References also used. *Daugherty, pp. 130, 139; Broemel, 285, 269.

**Longfield, pp. 95, 107; Crawshaw & Phillips, p. 195.

***Broemel, pp. 256, 274, 276; French & Svenson, pp. 116, 119.

****Neubecker, pp. 165, 170, 181, 186; French & Svenson, p. 124; XXth Century, p. 158.

†Kidder, pp. 41, 49, 198, 250.

††Kidder, pp. 124, 132, 172, 185.

Making a Safety Smoke Conveyor.*

Many times, after a building has been completed for a considerable period, it is found changes are desired, such as a summer kitchen, children's playroom, or one for some special purpose, which is usually built as an addition, at a convenient location abutting the main house. Quite often this addition necessitates some sort of construction that will convey smoke from a cook stove, or one of some other character. A brick or tile chimney is not wanted on account of its weight.

A stack made from No. 26 galvanized iron of the best quality would answer admirably if it could be arranged to go through a flat-seam tin roof, and on down through space, then slightly through the ceiling with absolute safety from fire, and danger of water seeping through.

This can be done by a combination of the stack, with cast iron safety heads, a cone and hood. It is somewhat elaborate. For that reason, the best should be used in its construction to assure longevity.

A cone-shaped support is made of galvanized iron to fit the outer cylinder of a "safety" so that the flange

*Written especially for AMERICAN ARTISAN AND HARDWARE RECORD by L. S. Bonbrake, County Hospital, Peoria, Illinois.

Operation.	Problems.	References.	Knowledge to Be Acquired.
Pattern drafting.	Any simple layout.	Any good text in mechanical drafting.	Dimension sketch. Developing patterns. Plan and elevation. Bill of material.
Cutting material.	Flat formed. Animal or designed. Cookie cutter.	Daugherty, pages 9, 22. Broemel, pages 39, 136, 161, 162.	Transfer of patterns to metal. Use of snips and squaring shears. Standard Size of metal. Cutting to avoid waste.
Soldering.	Above problems.	Daugherty, pages 40, 51. Williams, page 238.	Composition of solder. Coppers-forging tinning dipping. Kinds of flux for different metals. Soldering process.
Folding edges.	Tin box. Hexagonal cookie cutter. Sugar scoop. Match box.	Broemel, pages 45, 164, 185. Daugherty, pages 52, 57. Williams, page 193. Neubecker, page 167.	Making of hemmed edges. For mining on stakes. Use of bar solder. Forming hems and locks on cornice bars.
Forming cylinders.	Biscuit cutter. Doughnut cutter.	Broemel, pages 170, 171.	Use of forming rolls. How to adjust for different diameters.
Grooving.	Chimney tube. Roof flange. Scoops.	Daugherty, page 134. Longfield, pages 30, 45, 129. Broemel, pages 79, 172, 259.	Use of hand groover. Use of grooving machine.
Riveting.	Riveted pipes. Riveted elbows.	Neubecker, page 268. Broemel, pages 115, 135.	Use of solid punch. Use of rivet set. Flanging and stretching.
Wiring and turning.	Bread pan. Biscuit cutter.	Daugherty, pages 58, 64. Broemel, pages 85, 87, 110, 113, 217.	Use of turning machine. Use of wiring.
Burring.	Tin cup. Liquid measure.	Daugherty, page 68. Broemel, pages 88, 89, 201, 202. Longfield, page 34.	Use of burring machine.
Beading and crimping.	Stove pipe.	Broemel, pages 89, 174. Williams, pages 28, 211.	Use of beading and crimper.
Peaning and double seaming.	Boy Scout mess kit. Fernery pan. Pail.	Industrial Arts, pages 60, 62. Daugherty, page 79. Broemel, pages 105, 107, 211, 212. Williams, page 199.	Use of peaning hammer. Use of double seaming stake. Use of setting down machine. Use of double seaming machine.
Raising or bumping.	Pail cove.	Neubeck, page 256. Broemel, pages 215, 216.	Use of raising hammer.
Radial line development.	Conical roof flange. Funnel. Flaring pan. Round pitched cover.	Daugherty, page 160. Longfield, pages 83, 32, 135, 142.	Study of the cone.
Cornice and miter construction.	Square return miter. Face miters. Conductor heads. Cornice.	Daugherty, page 160. Broemel, pages 55, 69.	Advanced use of cornice brake.
Pipe intersections.	T-Joint. Y-Joint.	Longfield, pages 66, 78.* Neubecker, pages 47, 50, 68, 74, 313.	
Square elbows.	3-piece. Pipe offset. Pittsburg seam.	Daugherty, pages 155, 158.** Neubecker, page 42.	Duct construction. Pittsburg seam.
Round elbows.	3-piece. 4-piece. Any degree, any angle. Tapering elbow.	Longfield, pages 49, 64.*** Daugherty, page 149. Neubecker, pages 34, 39, 139, 141, 311, 312.	Methods of elbow layout—parallel. Line—miter rise—angular rise—general.
Triangulation.	Square to round. Furnace boot. Y-Square to round.	Kidder, pages 113, 123, 133, 140, 1-18. Longfield, pages 188, 210.****	
Cone.	Y-Round to round. 3 way branch. 4 way branch.	Longfield, page 221. Neubecker, pages 188, 202, 204.†	
Blowpipe and ventilating.	Pipe intersections. Reducing pipes. T-on tapered pipe. Ships ventilator.	Neubecker, pages 157, 160.†† XXth Century, pages 62, 69.	

on the top safety ring will rest upon and extend over it. The bottom of the cone is sheared to meet the pitch of the roof, when the safety ring will be perfectly level or horizontal in any direction across.

The length of the safety is determined by measuring from the top edge of the cone, to the bottom of the ceiling. It is useless to describe the construction of a safety having two cast rings, as headers, as every tinner knows the *modus operandi*. If not, AMERICAN ARTISAN AND HARDWARE RECORD will tell you.

A hood overspreads the safety, and envelopes the cone. It is fitted tight around the galvanized stack, and is soldered secure at a point on the stack, so that when it rests upon the outer edge of the cast head, it will allow the lower end of the stack to extend through and slightly beyond the bottom of the safety, to receive the smoke pipe from the stove. The stove pipe may be provided with a pipe collar or soot catcher which, when pushed up against the ceiling, will hide the bottom of stack and safety.

The bottom edge of the cone holding up the safety, when resting upon a tin roof, can be soldered; if shingles, or a composition felt roof of some character is used, a half inch flange can be thrown out on the bottom, when it may be secured by nailing through the flange, and made secure from leaks, or seepage by using some good roof cement, or covering it over with the mixture frequently mentioned in these columns.

The usual rain cap can cover the top of the stack, but it should be riveted on a two-inch band fitting over the end rather loose, when resting upon the edge. It has been observed, in certain locations, that when the free air space under the cap was deemed ample, yet the draft was imperceptible, nil. Yet when the cap was knocked off the top with a pole, the draft strengthened, and the stack produced required results.

Metal clips riveted around the top of a stack to engage the guy wires, are not satisfactory. Too much pull at one particular spot to

stand the strain for any considerable length of time. The iron at the rivets weakens, a hole is made, and down comes the stack.

Three metal clips may be riveted near the end joints center, used to pass a wire through, upon which loops are formed, to which the guy wires may be attached. The clips will keep the wire around the stack from slipping down. A band of iron around the stack, to which loops are secured, is better than riveting clips or bucket eave to the stack.

FRANK DAVIDSON SAYS Can't Do Without ARTISAN

To American Artisan:

Please extend my subscription for another year.

I have read AMERICAN ARTISAN for about 10 years and now I feel that I could not get along without it.

Wishing you all a Merry Christmas and a Happy New Year.

Yours very truly,

FRANK DAVIDSON.

Las Cruces, New Mexico,
December 9, 1923.

Care Is Best Preventative Against Fires.

Remember that the great majority of fires could be avoided by a little timely foresight and care. Precaution in looking after your premises may be the means of saving lives as well as valuable property. See that your chimneys and stovepipes are in good condition and keep the cracks in your chimneys cemented up. Guard against the accumulation of old dry leaves and rubbish in fence corners and buildings. "An ounce of prevention is worth a pound of cure" in averting fire loss. Safeguard your premises against fire and you will be surprised at the effect it will have on your property.

Selling doesn't consist of a running fire of talk any more than it does in being deaf and dumb. It is adjusting yourself to the personality of the customer in your effort to please and meet the customer's needs.

Notes and Queries

Ladder Support.

From National Roofing Company, 6281 Bartmer Street, St. Louis, Missouri.

Will you kindly inform us who makes the ladder support used for the purpose of holding ladder clear of cornice edge, which was advertised in AMERICAN ARTISAN several months ago?

Ans.—Windham Manufacturing Company, Garrettsville, Ohio.

Course in Sheet Metal Pattern Drafting.

From E. P. Powell, Jr., of E. B. Powell Metal Works, Tarboro, North Carolina.

Please tell me where I can take a course in sheet metal pattern drafting.

Ans.—St. Louis Technical Institute, 4543 Clayton Avenue, St. Louis, Missouri, and American School of Sheet Metal Pattern Drafting, 354 Whalley Avenue, New Haven, Connecticut.

Sheet German Silver.

From Iowa Falls Sheet Metal Works, Iowa Falls, Iowa.

Where can we get sheet German silver?

Ans.—Merchant and Evans Company, 347 North Sheldon Street, Chicago, Illinois.

Metal Forms for Concrete Work.

From L. D. Vincent, Rio, Wisconsin.

Please advise me who makes sectional metal forms for concrete work.

Ans.—The Blaw-Knox Company, 122 South Michigan Avenue, Chicago, Illinois.

Metal Stamping.

From V. Fulemider, 520 Fraunt Street, Newport, Arkansas.

Will you please advise me who can get out special stamping work?

Ans.—Moore and Company, Grand Avenue and Franklin Street; Reliance Die and Stamping Company, 501 North La Salle Street, and The Quadriga Manufacturing Company, 213 West Grand Avenue, all of Chicago, Illinois, and Hoyt Metal Company, Boatmen's Bank Building, St. Louis, Missouri.

Life isn't holding a good hand, but playing a poor hand well.

Boys' Building and Soldering Sets and Girl's Toy Stoves Have Prominent Place In Christmas Window Display.

Many Other Toys Galore Take Kiddies' Eyes in Window of Bunting Hardware Company, Kansas City, Missouri.

PERHAPS there is no other season of the year in which so large a variety of articles can be appropriately displayed in the window as at Christmas time. Toys, sporting goods, bicycles, games, electrical appliances, cooking utensils, silverware, stoves, washing machines, all are very fitting for Christmas gift displays.

Many stores do not have a toy de-

ing to put in the window, for he certainly omitted nothing.

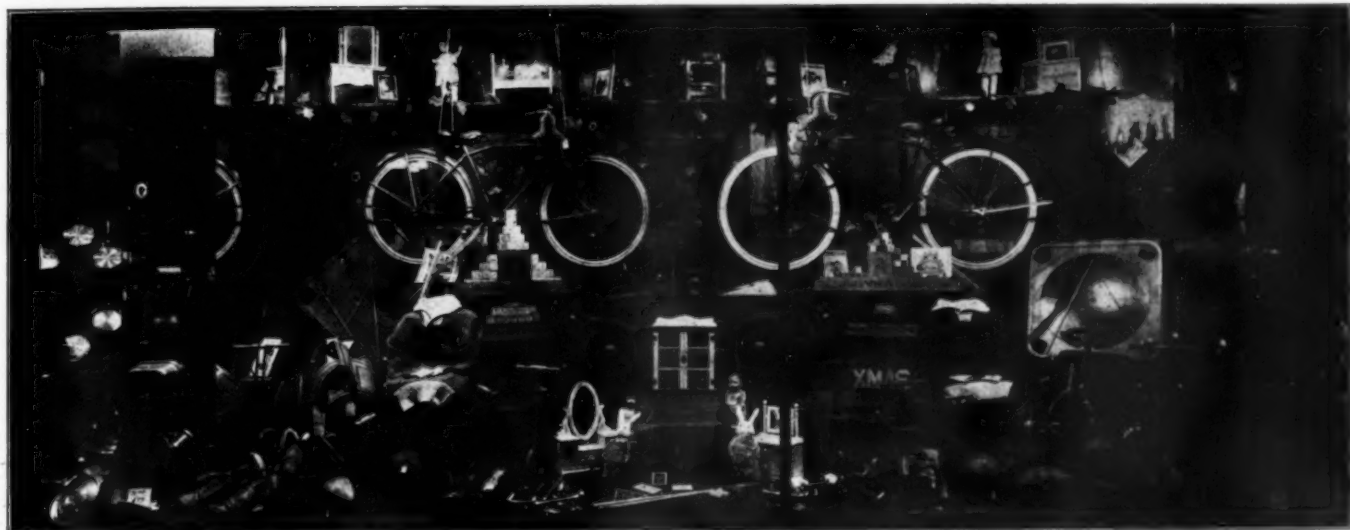
Everything that a child could possibly think of or want is there. For those who contemplate running a toy display, here is one that would be hard to improve upon. Toy automobiles, games, dolls, punching bags and boxing gloves, kiddie cars, bicycles, skates, to mention only a few of the articles that are shown.

portunity to work out your own ideas and to obtain not only a handsome cash prize for your effort, but added prestige as a window trimmer as well.

The cash prizes are \$50, \$25, \$15 and \$10, and the following rules will govern the contest:

Rules Governing Contest.

The photograph, together with descriptions of how the window dis-



Christmas Toy Window Display Arranged by Otto J. Gress, for the Bunting Hardware Company, 810 Walnut Street, Kansas City, Missouri, Which Attracted Large Crowds to the Store and Sold Many Toys.

partment and for these excellent displays can be made by featuring silverware, razors, electric irons, toasters, percolators, etc., which make excellent gifts for Christmas.

The toy display is indeed a very good feature for the Christmas display. Long before the day of days arrives the kiddies are talking about what Santa Claus ought to bring them. Page the halos!

The accompanying illustration shows a window display arranged by Otto J. Gress for the Bunting Hardware Company, 810 Walnut Street, Kansas City, Missouri.

Mr. Gress most certainly has remained awake at least a few nights figuring out just what he was go-

Do Not Neglect to Enter AMERICAN ARTISAN Window Display Competition, Now!

When you are passing store windows, do you give them a critical examination and attempt to size up the displays contained therein?

Do you try to analyze their contents in an effort to ascertain why they attracted your attention?

What thoughts do these displays call to your mind? Could you improve upon the display if given the opportunity?

The window display competition of AMERICAN ARTISAN AND HARDWARE RECORD, which closes January 12, 1924, gives you an excellent op-

plays were arranged and the materials used, may be sent by mail or express, charges prepaid, and must reach this office not later than January 12, 1924.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be placed within a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants may enter as many window displays as they desire.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted in this competition.

A competition committee of three will be appointed, one of whom will be an expert window dresser and one an experienced hardware man. This committee will pass upon the

merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the contest.

Advertising Round Table to Be Special Feature at Western Implement and Hardware Convention

Meeting to Be Held in Kansas City, January 15 to 17, for Which Unusually Interesting Program Has Been Arranged.

FOLLOWING is the program of the Thirty-fifth Annual Convention of the Western Retail Implement and Hardware Association to be held at Kansas City, Missouri, January 15 to 17, 1924:

Tuesday, January 15, 9 A. M.

Convention Singing—Conducted by Fred L. Taylor.

Invocation.

President's Address—A. W. Kavanaugh, Alva, Oklahoma.

Secretary's Report—H. J. Hodge, Abilene, Kansas.

Address, "The Implement Industry and Prospects for 1924"—Alex Legge, President, International Harvester Company, Chicago.

Report of Committee on Code of Ethics—George Fox, Chairman, Parsons, Kansas.

Special Session Tuesday Evening, 7:30.

Tuesday evening at 7:30 there will be held at the hall in the Eagles' Club house (first building north of the Missouri Theater) a special session for discussion of questions in the Question Box.

The success of the evening meeting last year was so marked that there was a general demand for its repetition. It was entertaining, instructive and in a high degree profitable. The entire session will be devoted to a free-for-all discussion of a docket of important questions. There will be convention singing, songs by our own make quartette and a general good time.

Wednesday, January 16, 9 A. M.

Convention singing.

Question Box—One hour to be devoted thereto. Leaders, T. J. O'Neil, C. O. Hitchcock, W. E. Haynes, J. F. Parrish, in turn.

Address, "The Determining Factor in Business"—E. G. Weir, Dowagiac, Michigan.

Demonstration of show card writing by J. H. De Wild, Advertising expert of St. Louis, Missouri.

Thursday, January 17, 9 A. M.

Convention singing.

Question Box—One hour to be devoted thereto and to be in charge of above named committee.

Reading of Resolutions.

Address, "How to Sell Your Goods"—Captain John W. Gorby, Director of Public Relations, National Transportation Institute, Chicago.

Election of Officers.

Report of Auditing Committee.

Report of Committee on Necrology.

Miscellaneous business.

Adjournment.

Round Table on Advertising.

Sessions at Coates House.

On Tuesday and Wednesday afternoons, at 2 p. m., there will be held a Round Table on Advertising. This will be in charge of C. L. Haynes, Emporia, Kansas.

Special attention is called to this feature. This department of our work has developed to great proportions. Starting in four years ago with a little handful of dealers, these round table sessions are now attended by several hundred. There seems to be an increasing interest in advertising which we are trying to develop.

J. H. De Wild, an advertising expert from St. Louis, will show some good and bad advertising and will lead the discussion on the subject. From 4 to 5 p. m. he will conduct a class in show card writing.

Wednesday Afternoon.

Discussion led by Mr. De Wild on window display, store display and merchandising problems.

All regular sessions of the convention will be held at the Missouri Theater (Century remodeled).

Government to Examine Activities of Foreign Combinations Controlling Raw Materials Needed Here.

Notice given by the American government of its intention to thoroughly investigate the activities of foreign combinations controlling raw materials of vital need to American industry and for which our manufacturers are predominantly dependent on imports, has resulted in stemming the tide of advancing prices, according to the annual report of Secretary of Commerce Hoover for the past fiscal year, which will be made public shortly in accordance with the law.

In discussing the situation, Secretary Hoover says: "There are a number of necessary raw materials for the supply of which we are predominantly dependent on imports from foreign countries. Possibly as a result of the war, but more particularly during the past eighteen months, there has been a growing tendency for producers of these commodities to combine in control of prices as against the American market. This is particularly the case in nitrates, tanning extracts, quinine, rubber, sisal, tin, cork, mercury, tungsten, and various minor minerals."

Who Makes "Family" Washing Machine?

TO AMERICAN ARTISAN:

Can you tell us who makes the "Family" washing machine, as I want to get parts for it?

Yours truly,

A. J. HARLANDER.

—, Wisconsin, December 6, 1923.

If you have a clerk who is always saying or thinking "I wasn't hired to do that," show him you can fire him for not doing it.

Blake Would Discourage Practice of Permitting Dealers to Return Unsold Goods.

Where Such Privilege is Granted, However, Dealer Must Comply with Certain Conditions of Maker.

THE problem of permitting dealers to return unsold goods for rebates has been one with which all manufacturers have had to contend.

Edward Blake, Jr., Vice-President of the Greenfield Tap and Die Corporation, Greenfield, Massachusetts, very graciously submitted an address on this subject before the members of the American Hardware Manufacturers' Association in convention at Atlantic City October 18.

Generally, Mr. Blake says, manufacturers are discouraging the practice of permitting dealers to return unsold goods for rebate, but where it is allowed for special reasons, the dealer must comply with certain conditions.

Goods Subject to Return to Manufacturer if Not Sold.

Following the business depression, when every dealer was trying to liquidate his slow-moving items, we had many requests to accept the return of overstocks or items which were not moving fast enough. To accept the return of these items presented several difficulties.

Our salesmen have never been authorized to sell goods subject to return if not sold; nor have they even been authorized to guarantee sales to our customers or in any way load them.

There are many dealers throughout the country, however, who appreciate the conditions under which the manufacturers operate and practically never submit a request to us for the privilege of returning any items which they find they have not moved. They have expressed themselves as realizing that they bought these goods and it is up to them to sell them.

We endeavor to have a policy and to have that policy a fair one. Occasionally some customer expresses the feeling that we are rather strict and that others are not as strict as we are, so in an effort to check this up we prepared a questionnaire of nine parts which we submitted to fifteen manufacturers, not all of them in the small tool line, but covering a range of industry, including tools of different kinds.

The Nine Questions Asked Were as Follows:

Are customers permitted to return goods for credit without placing orders for other goods at that time?

Are customers permitted to return goods in exchange for other goods of equivalent or greater value?

Do you require customers to prepay return charges?

Do you make a charge for refinishing if goods are in poor condition?

Do you make a charge for rehandling, and if so is it covered by uniform percentage deducted from the credit memo? Can customers return goods without first taking the matter up with your company?

Do you permit salesmen to grant customers the privilege of returning goods, or does the authority have to be given by the home office?

Do you have a definite time limit beyond which you do not permit the return of goods?

Do you permit customers to return goods which were formerly regular stock goods with you, but the manufacture of which you discontinued?

Their replies we tabulated with ours. They returned our questionnaire with answers and many submitted a letter going into greater detail, and supplementing the questionnaire with full explanation. I wish that you might read each of the replies which would show you how genuinely interested each one was in this subject.

What Answers to Questionnaire Revealed.

In tabulating, we looked for their general practice in order to bring our replies down to one thing or another and these replies were as follows:

To question 1—Are customers permitted to return goods for credit without placing orders for other goods at that time? Eight answered "No"; four answered "yes"; one said "very seldom"; another said "when under \$100," and one said "occasionally."

To question 2—Are customers permitted to return goods in exchange for other goods of equivalent or greater value? Seven answered "yes"; three answered "no"; three "very seldom"; one "double"; and one "yes, or without placing an order."

To questions 3 and 4—Do you require customers to prepay return charges? and do you make a charge for refinishing if goods are in poor condition? Everyone answered "yes."

To question 5—Do you make a charge for rehandling, and if so is it covered by uniform percentage deducted from the credit memo? Four answered "no," but one of these qualified that a charge was made on part of their line; eight answered "ten per cent," on giving this as a minimum and one as a maximum, but most saying that they had this charge and I judge that it is generally applied; two charge for labor cost only; one charges 20 per cent; one seldom makes any charge.

To question 6—Can customers return goods without first taking the matter up with your company? All answered "No."

To question 7—Do you permit salesmen to grant customers the privilege of returning goods, or does the authority have to be given by the home office? Eleven designated home office; two sales-

men; one both, and one reported a flexible policy.

To question 9—Do you permit customers to return goods which were formerly regular stock goods with you, but the manufacture of which you discontinued? Thirteen replied "no" and two replied that they credited such goods only at scrap value.

Conditions Under Which Unsold Goods May Be Returned.

It is decidedly noticeable how closely all are working, so I feel safe in saying that the general practice of this group of manufacturers, all of them prominent and representing the judgment of concerns who have shown their ability to progress along right lines, is to discourage the practice of returned goods wherever possible and when for reasons which seem to make it advisable the privilege is granted, then to insist that goods be in good condition, that they are not obsolete, that the customer stand all transportation charges and costs of finishing and a handling charge of 10 per cent. Goods can be returned only after the privilege is granted by the home office and customer is required to place an order for new goods valued at at least as much as the goods returned. This whole subject has no reference to faulty goods, for which we, like every other manufacturer, recognize our responsibility. This also excludes evident errors on the part of our customers that would place a hardship on them.

We, and I believe everyone else, try to apply any such rule with a rule of reason, and we always try to appreciate our customer's condition. We are here to serve them and we can serve them best by knowing and understanding their difficulties. In applying our rule we endeavor to have them understand our difficulties.

Your Window Lighting Can Help or Hurt Your Display.

Window lighting is something you ought to study. Along most business streets better results could be gained with half as much current used efficiently.

Successful display in the window or inside the store must be something more than just putting goods where people will see them. It means making people want to buy them.

Dirty reflectors and light bulbs may easily mean a reduction of 25 per cent in the amount of light you get from the current used.

The things that count are the things you can't count.

If you ever refuse or even hesitate to sell a customer goods out of a window, even though it might ruin the display, you may expect that customer to avoid your windows thereafter.

Grace Sees Turn in Steel Business and Predicts Fair Average Year for 1924.

Bethlehem Steel Corporation Head Makes Optimistic Survey of Business Outlook, Showing Similarity Between '23 and '24 Conditions.

THE following article from the *Iron Trade Review* gives ample reason for the dispelling of gloom and pessimism which recently pervaded the business world:

Business in the iron and steel industry has improved, according to a recent statement by Eugene G. Grace, President of the Bethlehem Steel Corporation. Mr. Grace said that the low point in buying occurred a few months ago and that the volume of business has been gradually increasing since.

"A great many signs," said Mr. Grace, "indicate that 1924 will be a repetition of 1923 and that business conditions in the two years will prove similar."

In regard to the expected demand for steel products from the railroads, Mr. Grace said:

"We face about the same railroad buying program for equipment and maintenance, particularly track materials and cars. The railroads have made good money in 1923 and seem assured of another good year. Next year is going to be one of the biggest rail years we have ever had."

"The automotive industry is anything but pessimistic. Motor car makers anticipate that their output in 1924 will be about the same as in 1923. Building construction has held up and indications are it will continue to hold up. The farmer has more money now than he has had in many years. His equipment is depleted and obsolete and he must buy soon. Canning and allied industries are scheduled for 100 per cent operations."

"Foreign demand is gradually increasing. Conditions in Cuba, I understand, point to a bumper year for that island. And it will require steel for plantation operations, sugar mills, etc."

"Conditions in Mexico appear to be improving all the time—and Mexico is an important market po-

tentially. Finally, public sentiment is generally better than it was a year or so ago.

"Altogether, while I do not look for a boom in 1924, I think it will be a fair average business year."

Selecting Extra Sales People for the Christmas Rush.

There is one problem which the retail merchant must face each year and that is the selection of extra sales help for the rush of the holiday season.

A careless and discourteous sales person can lose the amount of his salary many times over for the store. It, therefore, behooves the merchant selecting the extra sales people to use the utmost care when interviewing them.

A determination to learn the applicant's attitude toward the intended position is often much more valuable than his former experience.

Many merchants adopt the policy of calling their best and most experienced clerks into the conference when the applicants are being interviewed. Many of these clerks show surprising ability in making selections.

At any rate, the problem should by no means be treated lightly, as it may mean the loss of customers to the store.

Discounting Bills Actually Saves Dealer Money and Strengthens His Credit with Jobber.

Banks Look with Favor Upon Practice of Borrowing to Discount Bills.

IT IS the object of the trade paper to teach the storekeeper to think in terms of his own business; to keep him informed on current trade happenings; to offer him suggestions and primers which will enable him to be of greater service to his patrons; to instruct and guide him in his advertising so as to minimize the lost motion of his selling machine. In other words, the trade paper is the cheer leader encouraging the players instead of the crowd in the game of selling; it is the mouthpiece of the industry it represents.

Too many dealers, especially those in small towns, are running their stores in much the same fashion as did the proprietor of Siron's Inn in Robert Louis Stevenson's "Fontainebleau." The only difference was that, although the innkeeper permitted his guests to enter the cellar and help themselves to wine, each guest was charged a pro rata share of the running expenses at the end of the week. If a guest left without settling his accounts, the remaining visitors received an addi-

tional tax, and the guests therefore saw to it that this did not happen. Thus the proprietor of the Inn received his money and reduced his work to a minimum. His present day brother, however, is not quite so fortunate; he must not only wait on his customers behind the counter, but he must also, in many instances, wait for them to pay up, generally due to his lax collection methods or his ungainly practice of acting as a banker for his patrons; he forgets that he is in the retail business and not in the banking business.

There are instances on record of dealers who never borrowed money from a bank with which to discount their bills; they failed to realize that it is often cheaper to make a loan at 6 per cent at the local bank than to permit a discount to slip, but the feasibility of this is easily demonstrated: A man has a \$5,000 bill of goods upon which he is allowed by the jobber 2 per cent ten days, thirty days net. He goes to the bank and borrows \$5,000 at 6 per cent on a 60-day

note, with which he discounts his bill to the jobber. If he deducts the 2 per cent for ten days, he pays a net bill of \$5,000 less the discount of \$100, or \$4,900. His loan from the bank at 60 days will cost him \$50; therefore, he has actually made \$50 and strengthened his credit with the jobber. The bank, too, looks with favor upon borrowing of this character.

Perhaps there is no greater bugaboo in the retail selling game than that of making collections. The ways in which dealers go about this end of their business are about as varied and as great in number as are the number of dealers. The circumstances which surround each storekeeper are peculiar to that storekeeper. But it is safe to say that the man who goes after the delinquents with a smile will get farther than the one who resorts to drastic measures too soon.

I discovered a method used with good results recently, and the outstanding feature of this method was that the missive bearing the tidings to the "slow pay" put him in such good humor that he could not take offense. The letter ran as follows:

"It is rumored that a certain young society lady in this town kneads bread with gloves on. This incident may be peculiar, but there are others. We need bread with our shirt on. We need bread with our shoes on. We need bread with our pants on, and unless we collect a few outstanding accounts on our books, we will soon need bread without a d—n thing on, and this town will be a Garden of Eden if collections don't improve. You can do much to prevent this.

"Please send us your check to balance your account. Thanks!"

Another instance which comes to mind is that of the man who sent out a special delivery letter containing seven words, early in the morning. The letter read as follows:

"Dear Mr. and Mrs. Smith: Come in and see me today *Sure*."

These seven words were all that the letter contained. The response was immediate in some instances, others were in before noon, and be-

fore the day was over practically all of those to whom letters were sent had made some definite arrangement for paying the bill.

These are letters which do not create enmity, but get results. No one could take offense at a letter of this sort, and still the psychological effect brings in the kale.

F. A. Bostwick, Former Toledo Hardware Man, Dies in Chicago.

F. A. Bostwick, 66 years old, a retired hardware merchant of Toledo, Ohio, died suddenly Wednesday, December 12th, at the Auditorium Hotel, Chicago, where he had been a resident for the last twenty-one years.

Coming Conventions

Western Retail Implement and Hardware Association, Missouri Theater Building, Kansas City, January 15, 16, 17, 1924. H. J. Hodge, Secretary-Treasurer, Abilene, Kansas.

The West Virginia Retail Hardware Association Convention and Exhibit, Huntington, West Virginia, January 15 to 18, 1924. James B. Carson, Secretary-Treasurer, 1001 Schwind Building, Dayton, Ohio.

Mountain States Hardware and Implement Association Convention, City Auditorium, Denver, Colorado, January 22-24, 1924. W. W. McAlister, Secretary-Treasurer, Boulder, Colorado.

Kentucky Hardware and Implement Association, Louisville, January 22-25, 1924. J. M. Stone, Secretary-Treasurer, 202 Republic Building, Louisville.

Sheet Metal Contractors' Association of Indiana, Hotel Severin, Indianapolis, January 29 and 30. Leslie W. Beach, Richmond, Indiana, is Secretary.

Indiana Retail Hardware Association, Inc., Convention and Exhibition, Cadle Tabernacle, January 29, 30, 31, February 1, 1924. G. F. Sheely, Secretary, Argos.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February, 1924. Leon D. Nish, Secretary-Treasurer, Elgin, Illinois.

Nebraska Retail Hardware Association, Lincoln, Nebraska, February 5 to 8, 1924. George H. Dietz, Lincoln Nebraska, Secretary-Treasurer.

Wisconsin Retail Hardware Association Convention and Exhibition, Milwaukee Auditorium, February 6, 7, 8, 1924. George W. Kornely, Manager of Exhibits, 1476 Green Bay Avenue, Milwaukee. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, February 12, 13, 14, 1924. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids. A. J. Scott, Secretary, Marine City, Michigan.

Iowa Retail Hardware Association, Des Moines, Iowa, February 12, 13, 14 and 15, 1924. A. R. Sale, Secretary-Treasurer, Mason City, Iowa.

The Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition at the Philadelphia Commercial Museum, Philadelphia, Pennsylvania, February 12, 13, 14 and 15, 1924. Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia.

Ohio Hardware Association, Convention and Exhibition, Cincinnati, Ohio, February 19, 20, 21 and 22, 1924. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

New York Retail Hardware Association Convention and Exhibition, February 19, 20, 21, 22, 1924. Headquarters, McAlpin Hotel, and exhibition at Seventy-first Regiment Armory. John B. Foley, Secretary, 412-413 City Bank Building, Syracuse, New York.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, February 20, 21, 22, 1924. George A. Field, Secretary, 10 High Street, Boston, Massachusetts.

North Dakota Retail Hardware Association Convention and Exhibition, Municipal Auditorium, Fargo, February 20, 21, 22, 1924. C. N. Barnes, Secretary, Grand Forks.

Michigan Sheet Metal and Roofing Contractors' Association, February 25 to 28, 1924, Hotel Kerns, Lansing. T. E. Eiderle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Missouri Retail Hardware Association Convention and Exhibition, Marquette Hotel, St. Louis, February 26, 27 and 28, 1924. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis.

Minnesota Retail Hardware Association Convention and Exposition, St. Paul Auditorium, February 26, 27, 28, 29, 1924. C. H. Casey, Secretary, Jordan, Minnesota.

California Retail Hardware Implement Association Convention and Exhibition, Civic Auditorium, San Francisco, March 18, 19, 20, 21, 22, 1924. LeRoy Smith, Treasurer, 112 Market Street, San Francisco.

Retail Hardware Doings

Alabama.

At Huntsville, James M. Gill Hardware Company has been incorporated with a capital of \$5,000. Incorporators are: James M. Gill, Eddie S. Gill and J. A. Watkins.

Indiana.

Art M. Bosh has purchased the hardware stock of Puckett, Robins and Company at Ridgeville.

Oregon.

Ben Zigler of Roseburg and F. H. Fee of Raymond, Washington, have purchased the interest of Earl Badgley in the hardware firm of Badgley and Zigler at Reedsport.

Pennsylvania.

Roy C. Wissinger has purchased a half interest in the R. M. Wylie hardware store at 910 Stanton Avenue, New Kensington.

Wisconsin.

L. A. Darokeohler of Appleton has purchased the hardware store of James S. Millen on Main Street, Oconto. The new owner will do business under the name of the Oconto Hardware Company.

Lorain-Equipped Gas Range Makes Good Christmas Display Embellished with Poinsettias and Small Tree.

Flaming Red and Green Against White Enamel of Stove Produces Contrast Which Attracts Attention.

THE old saying that there is nothing new under the sun may be true, but originality need not exclude the use of old subjects made up in new combinations. In fact, what is originality if it is not a variation in the arrangement of some particular object or objects to form novel combination, in order to attract attention?

The *Magic Chef*, that most interesting little mouthpiece of the American Stove Company, in its December issue, carried a description of a Christmas window display of the Lorain Gas Range, that is original and exceedingly attractive.

The window itself and the background are very plain. The floor is overlaid with white paper.

The Lorain Gas Range stands a little to the left and about midway between the front and back of the window.

Set against the white splash back of the range was a flaming-red poinsettia with a green stem.

A green Christmas wreath containing one red poinsettia was hung around the red wheel.

To the right of the range was placed a small Christmas tree in a tub, the tree being decorated with bright-colored ornaments.

A red cord running from the red wheel of the range to the small tree had attached to the end nearest the tree a white card upon which were printed the words "to Mother."

Around the base of the tree were strewn quite promiscuously boxes of various sizes wrapped in Christmas paper to represent Christmas packages. Each box was sealed with a green seal and carried a bright red tag, supposedly the name tag.

The flaming red made a strong contrast with the white enamel and

would be sure to attract attention from all passers.

The only expense incurred in making this display, as far as can be seen, is the cost of the small tree, the trimmings, the wreath and the few Christmas wrappings. The time spent in arranging the display would be negligible.

This display will not fail to attract favorable comment. Try it.

Stove Salesmen's Association of Pennsylvania to Hold Annual Banquet December 19.

The Entertainment Committee Stove Salesmen's Association of Pennsylvania has issued the following invitation to its members to attend the 26th Annual Reception and Banquet:

It is indeed a source of both joy and pleasure that we announce the 26th Annual Reception and Banquet of the Stove Salesmen's Association of Pennsylvania, which will be held on Wednesday evening, December 19, 1923, at Hotel Walton, Broad and Locust Streets, Philadelphia, Pennsylvania.

We fully realize the task confronting us in making preparations for this event, when you consider the wonderful achievement consummated last year in the celebration of our Silver Anniversary, which will never be forgotten by those who had the good fortune to participate. We will, however, have certain features this year which will add greatly to your enjoyment and must be seen to be appreciated.

The afternoon as usual will be for the entertainment of out-of-town members and their guests.

The charge to the members will be \$4.00 per plate, that of guests \$5.00. As a favor, would you please arrange to be in banqueting room not later than 7 p. m.? Also state by return postal card if you are

coming, together with the number of guests you intend to bring, not later than Saturday morning, December 15th.

Entertainment Committee.

One Score Years and Five.

We gather here from far and near upon this winter night,
And 'round the festive board we greet our comrades with delight;
And as we join these loyal friends we're glad to be alive,
To celebrate the times gone by just one score years and five.

We've wandered up and down this zone and know each rugged mile,
We've seen the human traits of man, his trouble and his smile;
We've sold our stoves in ev'ry town and helped some dealer thrive,
But many are the changes, friends, in one score years and five.

Thus here we praise the natal day when first we formed a band—
The S. S. A. of P. that binds us in a friendly clan;
May all good things attend you now and may we all survive
To greet each other far beyond this one score years and five.

—Woodburn.

Many Stove Manufacturers Will Have Exhibits at Philadelphia Hardware Convention

Among the stove manufacturers who will have exhibits at the "Pasha" Convention in Philadelphia, February 12 to 15, 1924, are the following:

Cooperative Stove Company, Rochester, New York.

CopperClad Malleable Range Company, St. Louis, Missouri.

Abram Cox Stove Company, Philadelphia.

Fremont Stove Company, Fremont, Ohio.

Gohmann Brothers & Kahler, New Albany, Indiana.

Ironton Stove Company, Ironton, Ohio.

Keeley Stove Company, Columbia, Pennsylvania.

Klein Stove Company, Philadelphia.

Majestic Manufacturing Company, St. Louis, Missouri.

New Process Stove Company and Reliable Stove Company, Divisions of American Stove Company, both of Cleveland, Ohio.

Quakertown Stove Works, Quakertown, Pennsylvania.

Stove & Range Company of Pittsburgh.

Let Advertisements Impress Community with Idea That Yours Is Proper Store at Which to Buy Christmas Gifts.

Full Scheme of Christmas Display Should Be Launched Early in Second Week of December—Emphasize Christmas Spirit.

EVERY shop manager knows one of the first problems that confronted him upon the assumption of the duties of his position was the judicious distribution of the multifarious details with which he was entrusted.

He needed no one to tell him that in order to effect a judicious distribution of details, he was required to have a special knowledge of the men upon whom he would place the various responsibilities—he had to know them.

Exactly the same is true of adver-

tising. The man who would conduct an advertising campaign must know his field; he must have something of utility value to offer; he must present his article at a time when it would naturally be in demand if it is of a seasonal nature.

The department store practice is to make a sizeable reduction on a certain few articles to draw patrons to the store, then by skillful displays and adroit clerks the customers who come to the store for the articles on sale are prevailed upon to make additional purchases.

A well selected group of articles are shown in the accompanying reprinted advertisement. The space occupied in the *Troy, Ohio, News* was 6½ x 9 inches. This ad is indeed an extremely concentrated "special sale" piece of copy. Note how small the space is that is occu-

TELL US YOUR ADVERTISING STORY

What do you consider your best advertisement? What specific features of it made it pull? What effect did it have upon your sales? Was that effect immediate or gradual?

Our readers are interested in your Advertising Story. Tell your brother retailer in other towns what made your advertisement a success through the Ad-Critique Bureau of AMERICAN ARTISAN AND HARDWARE RECORD. Send in sample ads for publication and ask for advice on form letters, circulars and newspaper advertising. Let us serve you!

pied, but at the same time note that there is an entire lack of parsimoniousness in the description. Anyone looking at the ad would obtain at once all of the information needed to purchase any one of the articles. The prices are plainly marked. This is an exceptionally well arranged special sale ad and one that can be studied with profit.

* * *

How lost any community is without advertising was well illustrated during the recent strike of pressmen on the New York dailies, when the editions of the leading papers were cut down to eight pages. The department stores, the largest buyers of advertising space, were the biggest losers, for the moment the advertising stopped the business of the stores took a marked slump.

The department stores know that advertising pays.

GIBSON'S SPECIALS

NOW ON SALE

Aluminum Buckets



8-quart size,
99% pure
aluminum,
20-year
guarantee

89c

Every item listed here is a real bargain. Look over the list and come tomorrow and make your selection.

See
Windows

Coffee Pots



Two-quart
grey
enamel

69c

Dust Pans



High grade, very
special

9c

Granite Ware



Your choice of
sauce pan, milk
pan or wash bas-
in, only

14c

Roasters



Round, blue
enamel roast-
er, self bast-
ing.

59c

Clothes Baskets



Large, well made
splint clothes bas-
ket, with heavy
handles.

79c

Dish Pans



Grey enamel, 10-
qt. size, a real
bargain

39c

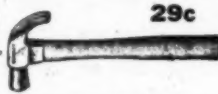


Corn Poppers, - 29c

Standard
size, in
steel.

Hammers

Cast steel,
splendid
quality.



29c

R. H. GIBSON, Hardware

"The House That Makes Good"

South Market St., Troy

BUY IN
TROY

Business Sentiment Greatly Stimulated by Coolidge Message; Railroad Traffic Continues Large.

Some Non-Ferrous Metals Have Eased, While Others Become Stronger—Lead Goes Up—Copper Also Gains on Large Shipments.

CHEERFUL reviews of the steel and automobile industries appeared the latter part of the week.

"Forward buying of steel is opening up gradually," the *Iron Trade* says. "This week witnessed closing of a number of contracts for first quarter delivery. Buying by automobile builders against heavy scheduled production for the first quarter is taking form."

"Bookings of steel are up to the volume of the corresponding period of November, although still below shipments," says the *Iron Age*. "Mill operations, if anything, have increased. The Steel Corporation's schedule is somewhat over 84 per cent of ingot capacity, but the industry as a whole is not over 70 per cent."

A record of 4,000,000 automobiles and trucks produced is assured this year, according to *Automotive Industries*. Large Christmas sales are surprising dealers.

Nothing could have crystallized public opinion for the tax reduction program more than the President's clear, concise and emphatic indorsement. He struck the same note in his opposition to the bonus and in his disposal of quack remedies for farm relief.

The railroad problem was handled with equal skill. The President would have scientific rate adjustment. He would have consolidation of the roads for efficiency. But he reminds that rates returning less fair earnings are unconstitutional.

Copper.

Business in copper was quiet. In sympathy with lower prices in London, an easier tone prevailed here.

Although sterling exchange was higher, the price of American copper c. i. f. Europe was unchanged for spot and slightly lower for future delivery.

Domestic consumers made few inquiries, but some business was done in Electrolytic at 13.12½ cents delivered for December, January and February shipment, although other producers were asking 13.25 cents delivered for these positions.

For March delivery practically all of the large producers were asking 13.25 cents delivered.

Electrolytic copper was held at 13 cents f. o. b. refinery for prompt, December and January shipment, with February and March positions held five to ten points higher, respectively.

There were buyers of Electrolytic for second quarter 1924 at 13.25 cents, but sellers are reluctant to make offers.

Third quarter position is nominally quotable at 13.40 cents refinery.

Lake copper was somewhat firmer at 13.25 cents to 13.37½ cents delivered, and casting copper was quiet at 12.75 cents to 12.87½ cents f. o. b. refinery.

Lead.

Lead is experiencing an unusual rush of customers to market, with the result that some smelters are short and the St. Louis price has jumped to 7.50 cents, though the American Smelting price to regular customers still is 7.25 cents, New York.

Tin.

The New York tin market had a better undertone, due in part to an advance of two points in sterling exchange, and in part to a letting up in the selling pressure.

A large business was done in Straits tin on Monday, but even so there were further offerings at the end of the day at 46.12½ cents. Wednesday there were one or two sales at 45.87½ cents, but before noon buyers had bid the price up to

46.12½ cents. Orders were not in such large volume as the day before, but offerings were much lighter.

Quotations for prompt and December tin are as follows: Straits, 46.37½ cents; Chinese and 99 per cent, 45.87½ cents; Banaka and Extra Refined, 46.37½ cents.

Zinc.

Zinc is steady at 6.25 cents, East St. Louis, now after slipping gradually from about 6.40 cents two weeks ago or so.

Buying is quiet, though at times in the past week there have been scattered sales for early shipment. London appears to have lost interest here for the present and yet does not go much below the export point, giving the impression that buying may be done here before long again for shipment across the Atlantic.

The monthly statistics of the zinc institute show an increase in stocks in November to 30,904 tons, as shipments of 39,163 tons were several thousand less than output of 44,280 tons. The latter increased about 2,000 tons, while shipments were practically unchanged from October.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$29.50; Commercial, 45-45, \$28.75, and Plumbers', \$27.50, all per 100 pounds.

Wire and Nails.

As was expected, this week has seen a fair start made on orders for wire products from jobbers. These orders have been held up on account of inventories.

The guarantee against decline in the fence price recently inaugurated did not result as successfully as was hoped.

A few small orders were taken, but most specifications called for nails, straight or mixed carloads.



*"For of all sad words of
tongue or pen
The saddest are these—
'It might have been.'"*



TOO often too little time is spent in investigating the claims of the various roofing manufacturers.

Too often a material of proven worth is turned down because the claims of its maker are founded on time tested facts rather than the tinted fancies of an over-zealous ad-writer.

TARGET AND ARROW

Look for this Trade → Ⓢ Mark on every Sheet

ROOFING TIN



is made by the pioneer tin and terne plate house in this country. For one hundred and thirteen years the policies of the Taylor business and the qualities of the Taylor products have been under the personal control of members of the Taylor family. Why turn down the old reliable for the new and untried?

N. & G. TAYLOR CO.

Offices: Philadelphia, Pa.

Mills: Cumberland, Md.

Established 1810



*The Best Eaves Trough
Miter in the
World*

Ask
your Jobber for
CHAMPION MITERS & ENDS
all Dependable Products

**CHAMPION
PRODUCTS**

BRADEN MFG. CO. TERRE HAUTE
INDIANA



Memorial Monuments

Write for Prices and
Illustrations

Gerock Bros. Mfg. Co.

Sheet Metal Ornaments
and
STATUARY

1252 So. Vandeventer Ave.

St. Louis, Mo., U. S. A.

**Your Standard
of Comparison
should be**

**"As Soft
as an
INLAND
SHEET"**

INLAND STEEL COMPANY

38 South Dearborn St., Chicago

Works:

Indiana Harbor, Ind.
Chicago Heights, Ill.

Branch Offices

Milwaukee St. Louis
St. Paul

The latter usually include some plain or barbed wire, black or galvanized, and occasionally a small amount of fencing. Operations still average about 70 per cent of capacity and prices are unchanged at 2.75 cents and 3.00 cents base, Pittsburgh, for plain wire and wire nails, respectively.

Bolts and Nuts.

Spot sales of nuts and bolts in less than carload quantities, with a few single carloads, substantiate the new prices announced last week.

Numerous inquiries are current for first quarter requirements of jobbers and users, and within the next week or ten days numbers of these will have protected themselves.

It appears the present schedule on the basis of 60 and 10 off for large machine bolts will apply in on first quarter contracts.

Rivets remain firm at 2.90 cents base Pittsburgh, and while sales at present are few, inquiries are on the increase.

Tin Plate.

Due in part to the railroad freight car business now pending, inquiry for plates in the past week at Chicago is stated to have been the heaviest of the year.

Bookings likewise have increased, although on the whole they are not up to shipments. Manufacturers of boilers have entered the market.

In addition to miscellaneous car material inquiry, plate makers in the past week bid on the material for the 3,057 refrigerator cars to be bought by the Pacific Fruit Express.

A few small oil storage tanks have come out. Practically all classes of plate buyers are claimed to have increased their interest and to be negotiating, or on the verge of negotiating, for their first quarter and half requirements. The quotation continues 2.60 cents, Chicago.

Sheets.

For ten days past the sheet market has shown continued strength under increasing demand, or demand which is in sight.

The leading interest adheres firmly to its announced levels of 3.00

cents, 3.85 cents, 5.00 cents and 5.35 cents, base Pittsburgh, respectively, on blue annealed, black, galvanized and full-finished automobile sheets.

The price situation is stronger from the makers' standpoint, as some of the low figures quoted a month ago are disappearing. Whereas black sheets could have been bought then as low as 3.65 cents, 3.75 cents now is the lowest obtainable figure. Information now available shows that a few buyers were able to place blue annealed business at 2.85 cents, and one unconfirmed report is to the effect that a large tonnage was booked at 2.75 cents.

Nothing less than 2.90 cents now is available. No longer are prices

around 4.85 cents procurable on galvanized sheets, 4.90 cents being the absolute minimum.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.00 to \$17.50; old iron axles, \$25.00 to \$25.50; steel springs, \$18.75 to \$19.25; No. 1 wrought iron, \$14.75 to \$15.25; No. 1 cast, \$18.00 to \$19.00, all per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 9½ cents; light brass, 6 cents; lead, 4¾ cents; zinc, 4 cents, and cast aluminum, 15 cents.

Interest Lacking in Pig Iron—Melters Covering Conservatively for First Quarters—Negotiations With Small Users.

December Iron Continues at \$23, Chicago—Southern Market Firm at \$21 for No. 2—Greater Demand Expected Shortly.

REAL interest is lacking in the pig iron market at Pittsburgh. Practically all large consumers have covered, leaving present negotiations confined to small users, except for three or four who are seeking 1,000 to 6,000 tons. These defer action, wanting the low figures quoted two weeks ago.

A Pennsylvania steelworks furnace is negotiating with a local customer for increased malleable tonnage for first quarter.

Large tonnages of No. 2 foundry iron are absent from the market. Small buyers are taking 100 to 500 tons each at \$22 to \$22.50, valley.

Bessemer is quoted \$22.50, minimum. One sale is recorded at \$23.

Pig iron inquiry and sales continue good at Chicago, though under the recent high mark. It is becoming more apparent many melters covered conservatively for their needs for the first quarter, awaiting definite selling of their product. Many foundries and makers of auto parts are in this class. This situation makes producers confident that

good requirements are coming out early for the first quarter.

Interest in pig iron for first half has increased.

Iron for December continues at \$23, and for first quarter \$23.50.

Some furnaces still are reaching outside their regular territory where concessions are made to meet competition.

Producers generally are satisfied, with a large volume of inquiry still coming out.

Southern sales are small. It is said \$21, Birmingham, is the minimum. Low phosphorus iron is inactive.

Charcoal is going in lots of several hundred tons, the recent price increase being no barrier to sales by a representative of a large maker.

Though there is not as much activity at this time as a month ago, the southern pig iron market is firm. Sales, mostly in small lots, are about equal to production. The general quotation is \$21 for No. 2 foundry iron. Surplus stocks are being worked down.

SHEET COPPER

FOR ROOFING and CORNICÉ WORK

ALSO
SPECIAL COLD ROLLED RESQUARED STRIP
Ideal for Conductor, Gutters, Valleys, Flashings,
Gravel Stops, etc.



MERCHANT & EVANS CO.

PHILADELPHIA

NEW YORK

CHICAGO

CLEVELAND

KANSAS CITY

WHEELING

AREX

These advertisements sell your work. Arex advertising is buying large sales every day—more men to know Arex superiority. Supply these better ventilators in your next job—you make a larger profit and build a reputation. Write for sample ads and the latest Arex catalog.

AREX COMPANY

J. C. Kerchen, Pres.

1581 Conway Building, Chicago



THE ORIGINAL SIPHONAGE VENTILATOR

H O O K S

ALL KINDS—ALL SIZES FOR BRICK OR WOOD

BERGER HOOKS are widely used throughout the trade. They are made of the best malleable iron and are high grade in every respect.

Try some on your next job

We can also furnish **SOLID BRASS HOOKS.**

Write for catalog showing complete line

BERGER BROS. CO.

229 to 237 Arch Street, PHILADELPHIA, PA.

Warerooms and Factory: 100 to 114 Broad Street



Make money by making sluggish chimneys work right with

IWANS' VOLCANO REVOLVING CHIMNEY TOP

NOTICE: From the illustration how the Volcano creates draft—the lower curved section of the hood is the deflector. The wind blowing through this opening diagonally upward past the chimney opening draws the air in the chimney thereby creating a continuous draft.

Vane, Hood and Deflector Patterns—FREE

Order Volcano Iron Mountings, they cost little, get patterns free and make hoods in your own shop.

The Volcano Iron Mountings are simple, made in two parts and are strong and very easy-swinging, permitting the hood to revolve in slightest breeze.

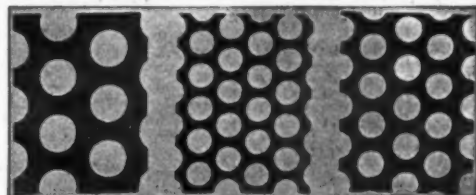
Order Volcano Mountings or complete tops today and start getting real profits—write for circulars and prices.

IWAN BROTHERS SOUTH BEND, IND.

Manufacturers of Hardware Specialties



PERFORATED METALS



All Sizes and Shapes of Holes

In Steel, Zinc, Brass, Copper, Tinplate, etc.

For All Screening, Ventilating and Draining

EVERYTHING IN PERFORATED METAL

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE ST.—CHICAGO, ILL. U. S. A.

NEW YORK OFFICE, 114 LIBERTY ST.

Plecker's Galvanized Eave Trough and Corrugated Expanding Conductors

Made of

Keystone

Copper Bearing
Steel

CLARK-SMITH HARDWARE CO.

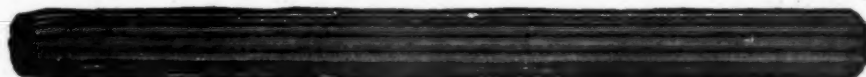
PEORIA, ILLINOIS

Costs no more

Lasts Longer

Therefore

Cheaper.



"THE STANDARD"

VENTILATOR and CHIMNEY CAP

DOES away with high stacks, swings freely in the slightest breeze and positively cures down-drafts. The strongest and most efficient combination to be had. Has no equal for chimney purposes. All jobbers sell them—write your jobber or us for prices and catalog today.

Manufactured by

STANDARD VENTILATOR CO.
LEWISBURG, PA.



Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.	
Chicago Foundry..	23 00 to 23 50
Southern Fdy. No.	
2	26 01 to 27 01
Lake Sup. Char-	
coal	29 04
Malleable	23 00 to 23 50

FIRST QUALITY BRIGHT TIN PLATES.

	Per Box
IC 14x20 112 sheets	\$12 45
IX 14x20	14 05
IXX 14x20 56 sheets	17 57
IXXX 14x20	18 12
IC 14x20	18 05
IX 30x28 112 sheets	27 50
IXX 30x28	29 85
IXXX 30x28 56 sheets	18 15
IC 30x28	17 20
IX 30x28	18 25

TERNE PLATES.

	Per Box
IC 30x28, 40-lb. 112 sheets	\$25 60
IX 30x28, 40-lb.	28 50
IC 30x28, 30-lb.	21 80
IX 30x28, 30-lb.	24 70
IC 30x28, 25-lb.	20 80
IX 30x28, 25-lb.	23 70
IC 20x28, 20-lb.	18 80
IX 20x28, 20-lb.	21 15
IC 20x28, 15-lb.	17 05
IX 20x28, 15-lb.	18 20
IC 20x28, 8-lb.	14 05

COKE PLATES.

Cokes, 80 lbs. base, 20x28	\$12 85
Cokes, 90 lbs. base, 20x28	14 10
Cokes, 100 lbs. base, 20x28	14 45
Cokes, 107 lbs. base, IC 20x28	14 85
Cokes, 135 lbs. base, IX 20x28	17 40
Cokes, 155 lbs. base, 56 sheets	9 75
Cokes, 175 lbs. base, 56 sheets	10 65
Cokes, 195 lbs. base, 56 sheets	11 70

BLUE ANNEALED SHEETS.

Baseper 100 lbs. \$3 50

ONE PASS COLD ROLLED

BLACK.	
No. 18-20.....per 100 lbs.	\$4 50
No. 22-24.....per 100 lbs.	4 55
No. 26.....per 100 lbs.	4 60
No. 27.....per 100 lbs.	4 65
No. 28.....per 100 lbs.	4 70
No. 29.....per 100 lbs.	4 75

GALVANIZED.

No. 16.....per 100 lbs.	\$5 10
No. 18-20.....per 100 lbs.	5 25
No. 22-24.....per 100 lbs.	5 40
No. 26.....per 100 lbs.	5 55
No. 27.....per 100 lbs.	5 70
No. 28.....per 100 lbs.	5 85
No. 30.....per 100 lbs.	6 35

BAR SOLDER.

Warranted.....per 100 lbs.	29 50
Commercial.....per 100 lbs.	28 75
Plumbers.....per 100 lbs.	27 50

ZINC.

In Slabs 6 50

SHEET ZINC.

Cask lots, stock, 100 lbs.	11 00
Less than cask lots, 100 lbs.	11 50

BRASS.

Sheets, Chicago base	19% c
Mill Base	17% c
Tubing, brazed, base	25% c
Wire, base	18% c

COPPER.

Sheets, Chicago, base.....	20% c
Mill base	20c
Tubing, seamless, base.....	24c
Wire, No. 9 & 10 B. & S. Ga.	17% c
Wire, No. 11, B. & S. Ga.	17% c

LEAD.

American Pig	3 45
Bar	9 50

Sheet.

Full Colls.....per 100 lbs.	10 75
Cut Colls.....per 100 lbs.	11 75

TIN.

Pig Tin	49% c
Bar Tin	50% c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR HEATER FITTINGS AND ACCESSORIES.

ADZES.

Coopers' Barton's	Net
White's	Net

AMMUNITION.

Shells, Loaded, Peters

Loaded with Black Powder 18%

Loaded with Smokeless Powder 18%

Winchester

Smokeless Repeater

Grade20 & 4%

Smokeless Leader

Grade20 & 4%

Black Powder20 & 4%

U. M. C.

Nitro Club20 & 4%

Arrow20 & 4%

New Club20 & 4%

Gun Wads—per 1000.

Winchester 7-8 gauge 10&7 1/4%

" 9-10 gauge 10&7 1/4%

" 11-38 gauge 10&7 1/4%

ASBESTOS.

Paper up to 1/16.....6c per lb.

Rollboard6 1/4c per lb.

Millboard 3/32 to 1/4.....6c per lb.

Corrugated Paper (350 sq. ft. to roll).....\$5.00 per roll

AUGERS.

Boring Machine.....40&10%

Carpenter's Nut50%

Hollow.

Stearns, No. 4, doz.....\$11 50

Post Hole.

Iwan's Post Hole and Well 25%

Vaughan's, 4 to 9 in.....\$15 00

AXES.

First Quality, Single

Bitted (unhandled, 3 to 4 lb., per doz.....\$14 00

Good Quality, Single

Bitted, same weight, per doz.....13 00

BARNS, CROW.

Steel, 4 ft., 10 lb.....\$ 80

Steel, 5 ft., 18 lb.....1 40

Pinch bars, 5 1/4 ft., 24 lb.....1 60

BARNS, WRECKING.

V. & B. No. 12.....\$0 34

V. & B. No. 14.....0 45

V. & B. No. 16.....0 57

V. & B. No. 18.....0 68

V. & B. No. 20.....0 83

BITS.

All Vaughan and Bushnell.

Screw Driver, No. 30, each \$ 27

Screw Driver, No. 1, each 16

Reamer, No. 80, each... 41

Reamer, No. 100, each... 41

Countersink, No. 13, each... 20

Countersink, Nos. 14-15 each 27

BLADES, SAW.

Wood.

Atkins 30-in. 40 26

Nos. \$3 90 \$9 45 \$5 40

BLOCKS.

Wooden45%

Patent45%

BLOW TORCHES (See Firepots).

BOARDS.

Stove, Per Doz.

Cy/stal, 22"23 90

Wrah.

No. 760, Banner Globe (single)per doz. \$5 25

No. 652, Banner Globe (single)per doz. 6 75

No. 501, Brass King.....per doz. 8 25

No. 860, Single-Plain Pump6 25

BOLTS.

Carriage, Machine, etc.

Carriage, cut thread, %x4 and sizes smaller and shorter50%

Carriage sizes, larger and smaller and shorter.....50-10%

Machine, %x4 and sizes smaller and shorter.....50-5%

Machine, sizes larger and longer than %x4.....50-10-5%

Stove70-10%

BRACES, RATCHET.

V. & B. No. 444 8 in.....\$4 54

V. & B. No. 222 8 in.....3 29

V. & B. No. 111 8 in.....3 55

V. & B. No. 11 8 in.....3 02

BRUSHES.

Hot Air Pipe Cleaning.

Bristle, with handle, each \$0 85

Fine Cleaning.

Steel Only, each.....\$1 25

BURRS.

Copper Burrs only.....40%

BUTTS.

Steel, antique copper or dull brass finish—case lots—

3 1/4 x 3 1/4—per dozen pairs \$3 45

4 x 44 74

Heavy Bevel steel inside sets, case lots—

.....per dozen sets \$ 00

Steel bit keyed front door sets, each2 00

Wrought brass bit keyed front door sets, each.... 4 00

Cylinder front door sets, each2 50

CEMENT, FURNACE.

American Seal, 5 lb. cans, net \$ 45

" 10 lb. cans, " 90

" 25 lb. cans, " 2 00

Asbestos, 5 lb. cans " 45

Pecora.....per 100 lbs. 7 51

CHAINS.

Sher. Steel Safety Chain.

500-ft. coil, per ft......02

100 to 500 ft., per ft......02 1/2

Less than 100 ft., per ft.. 03

Iron Jack Chain.

Box (12 yds.)......45

CHIMNEY TOPS.

Iwan's Complete Rev. & Vent.....30%

Iwan's Iron Mountain only..35%

Standard.....30 to 40%

CHISELS.

Cold.

V. & B. No. 25, 1/4 in., each \$0 26

V. & B. No. 25, 1/2 in., each 41

Diamond Point.

V. & B. No. 55, 1/4 in.....0 31

V. & B. No. 55, 1/2 in.....0 40

Round Nose.

V. & B. No. 65, 1/4 in.....0 29

V. & B. No. 65, 1/2 in.....0 40

Socket Firmer.

Cape.

V. & B. No. 50, 1/4 in.....0 31

V. & B. No. 50, 1/2 in.....0 57

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.....List less 25-40%

Yankee, for Yankee Screw Drivers.....\$6 00

CLAMPS.

Adjustable.

No. 100, Door (Stearns) doz.....\$22 00

Carpenters'.

Steel Bar..List price plus 20%

Hose.

Sherman's brass, 1/4-inch per doz.....\$0 45

Double, brass, 1/4-inch, per doz.....1 20

CLINKER TONGS

Front Rank, each.....\$1 75

Per doz.....1 85

CLIPS.

Damper.

Acme, with tail pieces, per doz.....\$1 30

Non Rivet tail pieces, per doz.....21

COPPERS—Soldering.

Pointed Hoofing.

2 lb. and heavier.....per lb. 40c

2 1/2 lb.....45c

3 lb.....48c

1 1/2 lb.....55c

1 lb.....60c

CORD.

No. 7 Std. per doz. banks..\$10 35

No. 8 " " " " 12 00

CORNICE BRAKES.

Chicago Steel Bending.

Nos. 1 to 6 B.....10%

COUPLINGS, HOSE.

Brass.....per doz. \$2 30

CUT-OFFS

Kuehn's Korrek Kutoffs:

Galv. plain, round or cor. rd

Standard gauge40%

26 gauge10%

DAMPERS.

"Yankee" Hot Air.

7 inch, each 20c, doz.....\$1 70

8 " " " " 2 40

9 " " " " 2 70

10 " " " " 3 00

Smoke Pipe.

7 inch, each.....\$ 35

8 " " " " 40

9 " " " " 45

10 " " " " 50

12 " " " " 55

Reversible Check.



REQUIRES ONLY HEAT

CHICAGO SOLDER COMPANY
4201 Wrightwood Ave., CHICAGO, ILL.

CORTRIGHT METAL SHINGLES.

Cut out of tin-plate, stamped into shape and then dipped separately in molten zinc.

The dipping or coating operation coming after the shingles have been cut and formed means that this coating on

Cortright Hand Dipped Shingles

has not been cracked or broken in any stamping operation. Also that there is a coating on all edges as well as sides.

If you are not familiar with Cortright Metal Shingles we will be glad to send literature.

CORTRIGHT METAL ROOFING CO.
Philadelphia — Chicago

50-INCH FORMING ROLL

This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and Punches, all sizes, for hand or belt power
Write for Catalog "R"

BERTSCH & CO., Cambridge City, Ind.



OSBORN Sheets Conductor Gutter

A large stock always on hand. Write for interesting prices.

THE J. M. & L. A. OSBORN COMPANY, Cleveland
Sheet Metal Workers' and Furnacemen's Supplies

Please Mention
**AMERICAN ARTISAN AND
HARDWARE RECORD**
When writing to advertisers



The ELECTRIC CITY Gutter Former

WE specialize in making good machinery and our gutter formers are the most practical ever produced for

Forming Long Length Gutters

The Electric City Gutter Former is made in all sizes and we carry all sizes in stock. You should have this machine in your shop—it is easily and quickly operated and turns out first class work.

Get our low price on this former

We have been making this gutter former for over 20 years and its simple, strong construction and extremely low price have made it a nation-wide favorite.

Write today, for prices and further particulars on this machine and on our Double Truss Cornice Brake. Your jobber can supply you or we can ship immediately from stock.

FORMING MACHINE CORP.

Successors to
DOUBLE TRUSS CORNICE BRAKE CO.

35 Chandler St., Buffalo, New York
W. B. Topp, Sydney — Agent for Australia and New Zealand

CHICAGO STEEL CORNICE BRAKES STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSES
Most Durable, Easiest Operated, Low in Price
Made in All Lengths and to Bend All Gauges of Metal. Over 15,000 in use

WRITE FOR PARTICULARS

DREIS & KRUMP MFG. CO., 2915 S. Halsted Street, CHICAGO

C. G. HUSSEY & CO.

Rolling Mills and Office, PITTSBURGH, PA.

Manufacturers of

SHEET COPPER, BOTTOMS, ROLL COPPER, TINNED AND POLISHED COPPER, NAILS, SPIKES, RIVETS, CONDUCTOR PIPE, EAVES TROUGH, ELBOWS, SHOES, MITRES, ETC.

Branch Warehouses in New York, Chicago and St. Louis

"HOTTEST BUILT WITHOUT A BLOWER"

Buzzer—Automatic Blast Gas Soldering
Reg. U. S. Pat. Off. Furnaces and Soft Metal Furnaces

Will heat a pair of 14 lb. Coppers in 5 Minutes.

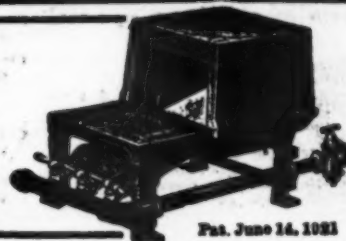
Pay for themselves in saving of Gas,
Soldering Coppers and time. Will last a lifetime.

Sent on 10 Days' Trial—Write for Catalogue of Full Line

CHAS. A. HONES, Inc. 123 Grand Avenue
BALDWIN, LONG ISLAND, N. Y.



Pat.
June 14, 1921



Pat. June 14, 1921

Uniform, Collar Adjustable.	
5-inch	Doz. \$2 00
6-inch	Doz. 3 10
7-inch	Doz. 3 60

WOOD FACES—50% off list.

FENCE.	
Field Fence	50%
Lawn	53%

FILES AND RASPS.

Heller's (American)	65-5%
American	65-5%
Arcade	60 & 10%
Black Diamond	50-5%
Eagle	60-10%
Great Western	60 & 10%
Kearney & Foot	60 & 10%
McClellan	60 & 10%
Nicholson	60-14%
Simonds	60%

FIRE POTS.

Ashton Mfg. Co.	
Complete line	
Firepots and Torches	52%

Otto Berns Co.

No. 1 Furn. Gasoline with large shield, 1 gal.	\$ 6 75
No. 3 Furn. Kerosene, 1 gal.	15 12
No. 10 Brasier, Kerosene or Gasoline, 10 gals.	47 52
No. 5 Torch, Gasoline or Kerosene, 1 pt.	7 92
No. 33 Torch, Gasoline, 1 quart	5 40
No. 36 Torch, Gasoline, 1 pt.	4 05

Clayton & Lambert's.

East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas	52%
West of above boundary line	48%

Geo. W. Diener Mfg. Co.

No. 02 Gasoline Torch, 1 qt.	\$ 5 55
No. 0250, Kerosene or Gasoline Torch, 1 qt.	7 50
No. 10 Tinner's Furn. Square tank, 1 gal.	12 60
No. 15 Tinner's Furn. Round tank, 1 gal.	12 00
No. 31 Gas Soldering Furnace	3 60
No. 110 Automatic Gas Soldering Furnace	10 50

Double Blast Mfg. Co.

Gasoline, Nos. 25 and 35	60%
--------------------------	-----

Quick Meal Stove Co.

Vesuvius, F.O.B. St. Louis	30%
(Extra Disc. for large quantities)	

Chas. A. Hones, Inc.

Buzzer No. 1	\$ 9 00
" " 2	12 00
" " 22	13 50
" " 42	15 00
" " 43	19 00

FREEZERS—ICE CREAM.

Peerless and Alaska	
1 quart	\$2 95
2 quart	3 45
3 quart	4 10
White Mountain	
1 quart	\$3 50
1 quart	4 90
2 quart	5 70

GALVANIZED WARE.

Pails (Competition), 5 qt.	\$1 35
10-qt.	2 15
12-qt.	2 35
14-qt.	2 65

Wash tubs, No. 1	\$6 10
No. 2	6 80
No. 3	7 90

GARAGE DOOR HARDWARE.

Stanley	All net
---------	---------

GAUGES.

Marking, Mortise, etc.	Nets
Wire.	
Diston's	25%

GIMLETS.

Discount	65% and 10%
----------	-------------

GLASS.

Single Strength, A and B.	all sizes 83 & 85%
Double Strength, A, all sizes	84%

GREASE, AXLE.

Fraser's	
1-lb. tins, 25 to case, per case	\$ 4 75
2-lb. tins, 24 to case, per case	7 30
5-lb. tins, 12 to case, per case	7 30
10-lb. tins, per dozen	10 40
15-lb. tins, per dozen	12 30
25-lb. tins, per dozen	19 30

HAMMERS, HANDLED.

All V. and B.	Each, net
Blacksmiths' Hand, No. 6, 26-oz.	\$1 00

Engineers' No. 1, 26-oz.

Farrier's, No. 7, 7-oz.	93
-------------------------	----

Machinists', No. 1, 7-oz.

Nail.	
-------	--

Vanadium, No. 41, 26-oz.

each	1 50
------	------

Vanadium, No. 41 1/2, 16-oz.

each	1 50
------	------

V. & B., No. 11 1/2, 16-oz.

each	1 01
------	------

Garden City, No. 11 1/2, 16-oz., each

	75
--	----

Tinner's Riveting, No. 1, 8-oz., each

	79
--	----

Shoe, Steel, No. 1, 18-oz., each

	65
--	----

Tack.

Magnetic, No. 5, 4-oz., each	81
------------------------------	----

HAMMERS, HEAVY.

Farrier's, No. 10, 10-oz.	\$1 01
---------------------------	--------

HANDLES.

Axe.	
------	--

Hickory, No. 1, per doz.

	4 00
--	------

Hickory, No. 2, per doz.

	3 00
--	------

1st quality, second growth

	6 00
--	------

Special white, 2nd growth

	5 00
--	------

Chisel.

Hickory, Tanged, Firmer	
-------------------------	--

Assorted, per doz.

	55c
--	-----

Hickory, Socket, Firmer,

Assorted, per doz.	70c
--------------------	-----

File, per doz.

	\$1 20
--	--------

Hammer and Hatchet.

No. 1 per doz.	\$0 90
----------------	--------

Second growth hickory,

per doz.	1 50
----------	------

Soldering.

Per doz.	\$2 40
----------	--------

HANGERS.

Conductor Pipe.	
-----------------	--

Milcor Perfection Wire.

	25%
--	-----

Eaves Trough.

Steel hangers	30%
---------------	-----

Triple Twist wire.

	10%
--	-----

Milcor Eclipse Wire.

	20%
--	-----

Milcor Triplex Wire.

	15%
--	-----

Milcor Milwaukee Extension.

	15%
--	-----

Milcor Steel (galv. after form- ing) List plus.

	12 1/2%
--	---------

Milcor Seldock E. T. Wire,

List plus	40%
-----------	-----

HASPS.

Hinge, Wrought, with staples, Net	
-----------------------------------	--

HATCHETS.

V. and B. Supersteel.	Each
-----------------------	------

Broad, No. 1, 24-oz.

	\$1 43
--	--------

Half, No. 1, 15-oz.

	1 25
--	------

Half, No. 3, 27-oz.

	1 37
--	------

Claw, No. 1, 19-oz.

	1 31
--	------

Flooring, No. 1, 20-oz.

	1 43
--	------

Shingling, No. 1, 17-oz.

	1 20
--	------

Lathing, No. 1, 14-oz.

	1 30
--	------

Lathing, No. 2, 17-oz.

	1 35
--	------

Vanadium Steel.

Half, No. 62, 23-oz.	\$1 82
----------------------	--------

Underhill Pattern Lathing,

9 row, 19-oz.	2 29
---------------	------

HINGES.

Heavy Strap, in Bundles.	
--------------------------	--

4 inch, dozen prs.

	\$1 12
--	--------

5 " " " "

	1 57
--	------

6 " " " "

	1 93
--	------

8 " " " "

	3 21
--	------

Extra Heavy T in Bundles.

4 inch, dozen prs.	\$1 74
--------------------	--------

5 " " " "

	1 85
--	------

6 " " " "

	2 31
--	------

8 " " " "

	3 39
--	------

HOES.

Garden	Net
--------	-----

HOOKS.

Box.	
------	--

V. and B. No. 3, each.

	\$9 25
--	--------

Conductor.

Milcor	
--------	--

"Direct Drive" Wrought

Iron for wood or brick	15%
------------------------	-----

Cotton.

V. and B. No. 2, each	24
-----------------------	----

Hay.

V. and B. No. 1, each	28
-----------------------	----

Bar Meat.

V. and B. No. 24, 1/2".	each
-------------------------	------

V. and B. No. 24, 1/2".

each	16
------	----

Screw Meat.

V. and B. No. 2, per gro.	6 50
---------------------------	------

Butchers' "B."

V. and B. No. 6, each	98
-----------------------	----

V. and B. No. 3, each

	11
--	----

ROSE.

Per Ft.	
---------	--

1/2-in. 2 ply molded.

3/4 c to 1 1/2 c	
------------------	--

1/2-in. cord

3/4 c to 1 1/2 c	
------------------	--

1/2-in. wrapped

	13 1/2 c
--	----------

HUMIDIFIERS.

"Front-Rank," Automatic.

In single lots	50%
----------------	-----

In lots of 10 or more

	50-5%
--	-------

In lots of 25 or more

	50-10%
--	--------

Vapor pans, etc., each

	50%
--	-----

IRONS.

Sad.

Genuine Mrs. Potts, nickel	
----------------------------	--

plated, per set.

	\$1 55
--	--------

Asbestos No. 70, per set.

	2 10
--	------

Asbestos No. 100, per set.

	2 30
--	------

E. C. Stearns.

No. OA Corner, doz. sets	\$2 50
--------------------------	--------

No. OB

	2 75
--	------

KNIVES.

Butcher.

Beechwood Handles, 6-inch	blade
---------------------------	-------

Beechwood Handles, 7-inch

blade	25%
-------	-----

Beechwood Handles, 3-inch

blade	25%
-------	-----

Cooper's Hoop.

	35%
--	-----

Drawing.

Standard	25%
----------	-----

Adjustable

	25%
--	-----

Barton's Carpenters'

	25%
--	-----

Hay.

Iwan's Solid Socket	25%
---------------------	-----

Heath's

	25%
--	-----

Iwan's Sickle Edge

	25%
--	-----

Iwan's Imp'd Serrated

	25%
--	-----

Hedge.

Challenge	25%
-----------	-----

Diston's No. 1

ART METAL CEILINGS AND SIDE WALLS

QUALITY—DURABILITY—BEAUTY

Are thoroughly combined in **FRIEDLEY-VOSHARDT ART METAL CEILINGS AND SIDE WALLS**. We have added to our list a great number of new and handsome designs. Special designs can be made if desired. Only the **best** of materials used. We are prepared to serve **you**. Ceiling Catalog No. 33 on request.

DONT DELAY—WRITE TODAY

FRIEDLEY-VOSHARDT CO.

Office: 733-737 S. Halsted St. Factory: 761-771 Mather Street
CHICAGO, ILLINOIS

VESUVIUS

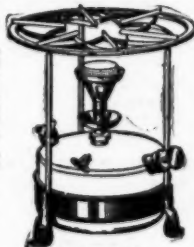
Blow Torches and Stoves



For Gasoline

have an extremely powerful flame. They are made of the best material that can be obtained and their construction insures long serviceability.

Write for Descriptive Circular Today



For Coal Oil

QUICK MEAL STOVE CO.

Div. American Stove Company
825 Chouteau Avenue St. Louis, Mo.

CHICAGO STEEL SLITTING SHEAR LIGHT—POWERFUL DURABLE



Capacity 10 gauge sheets
Any Length or Width
Flat Bars 3/16 x 2"
Weight 22 pounds
Price \$12.50 Net
F. O. B. Chicago

Made of pressed steel and equipped with hold-down. Blades of highest grade crucible steel. Most indispensable high grade shears made. Equal to other shears selling at over twice the price. **ORDER YOURS TODAY**

DREIS & KRUMP MFG. CO., 2915 S. Halsted St., Chicago

Read the Wants and Sales Pages

THREE PIECE COIL CUP



**FITS
GROOVE
IN
TOP
PLATE**
Patented



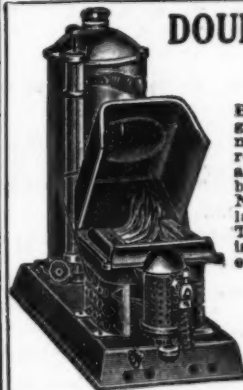
No. 22 Fire Pot
Ask for Latest Price

MANY GOOD POINTS

No. 22 Coil Fire Pot has all of the latest improved features. Drawn steel Tank tinned inside and out. Powerful, quick acting pump. Large funnel with dust-proof cap. Patented three-piece coil cup which can be removed by unscrewing three large nuts, exposing the burner and coil. Built for quick work and hard service. Jobbers supply at factory prices. Catalogue mailed upon request.

CLAYTON & LAMBERT MFG. CO.

10635 Knodell Avenue
DETROIT, MICH., U. S. A.



No. 25 DOUBLE BLAST
Tinner's Fire Pot

DOUBLE BLAST FIRE POTS

Gasoline Burning

The **GENERATOR** used in **DOUBLE BLAST FIRE POTS** is the most powerful generator ever put on a fire pot. It is made of brass and will not rust or corrode. It has no packing of any kind, and as it has no small channels it cannot clog but will always burn a blue flame. Our No. 25 Fire Pot shown herewith has a large brass pump one inch in diameter. The tank is made of galvanized steel and is firmly fastened to the base. The burner on this fire pot is so arranged that the two hot blasts are forced from the outside to the center so that the iron in the fire receives both hot blasts. There are more features that you should know about.

Our latest catalog describes our line in full. Write for it today.

DOUBLE BLAST MFG. CO.
NORTH CHICAGO, ILL.



Because of noiseless flame, durability and remarkable efficiency Torrid Tinner's Furnaces are displacing all others of their type.



Geo. W. Diener Mfg. Co., Chicago, Ill.

MARSHALLTOWN

Throatless Shears



HERE is a machine that will do all your sheet cutting. It takes sheets of any size and does accurate work quickly. It is our No. 18 Hand Power Shear, the size for the average shop. It is high grade throughout, being made of the strongest and toughest metals.

It sells at a price which makes it possible for you to own one **NOW**.

Covered By Patent No. 1020508

Address Dept. A. A. and ask for our catalog and price list covering our entire line.

MARSHALLTOWN MFG. CO., Marshalltown, Iowa

FEDERALITE FINISHES



White Enamels That Possess Lasting Qualities

WHEN it comes to selling your customers White Enamel you have to choose your lines carefully if you are to give the satisfaction demanded. It is common for White Enamels to turn **yellow**, to **crack** and to **lose luster**.

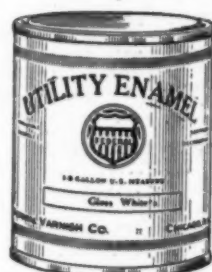
Federalite and Federal White Enamels and Flat White Finishes are all made to meet individual and exact requirements.

With the Federal complete line in stock you can serve your trade with their particular needs—make good profits and give satisfaction.

The reason why Federal Enamels possess lasting qualities is that we pay particular attention to small but important details in making Federal Enamels as well as using only high quality ingredients.

Federalite Coaters and Oil Stains also have special service features that make them superior products.

Let us send you descriptive catalog giving full details—also our dealer helps and prices.



Federal Varnish Company

2837-55 Irving Park Blvd.

CHICAGO, ILLINOIS

SNIPS, TINNERS'.

Clover Leaf	.....40 & 10%
National	.....40 & 10%
Star	.....50%
Milcor	.....Net

SQUARES.

Steel and Iron	.....Net
(Add for bluing, \$3.00 per doz. net)	
Mitre"
Try"
Try and Bevel"
Try and Mitre"
Fox's	.....per doz. \$6.00
Winterbottom's	.....10%

STAPLES.

Blind.	
Barbed	.....per lb. 31c @ 23c
Butter, Tub	....." 16 @ 19c
Fence"
Polished	.....per 100 lbs. \$5 45
Galvanized	....." 6 15
Netting.	
Galvanized	.....per 100 lbs. \$6 54
Wrought.	
Wrought Staples, Hasps and	
Staples, Hasps, Hooks and	
Staples, and Hooks and	
Staples	.....50 & 10%
Extra heavy	.....35%

STONES.

Aze.	
Hindustan	.....per lb. New Nets
More Grite"
Washita"
Emery.	
No. 126	.....per doz. New Nets
Oil Mounted.	
Arkansas Hard	
No. 7	.....per doz. New Nets
Arkansas Soft.	
Washita No. 717"
Oil—Unmounted.	
Arkansas Hard per lb. New Nets	
Arkansas Soft.	
Lily White"
Queer Creek"
Washita"
Seythe.	
Black Diamond per gro. New Nets	
Crescent"
Green Mountain"
LaMolle"
Extra Quinine"
bor"
Red End"

STOPS, BENCH.

No. 10 Morrill pat-	
tern	.....per doz. \$11 00
No. 11 Stearns pat-	
tern	....." 10 00
No. 15 Smith pat-	
tern	....." 7 00

STOPPERS, FLUE

Common	.....per doz. \$1 10
Gem, No. 1	....." 1 10
Gem, flat, No. 3	....." 1 00

STRETCHERS.

Carpet.	
Bullard's	.....per doz. \$3 90
Excelsior	....." 5 25
Malleable Iron	....." 70
Perfection	....." 6 30
King	....." 4 50

Wire.	
O. S. Elwood, No. 1 per doz. Nets	
O. S. Elwood, No. 2"

SWIVELS

Malleable Iron	.....per lb. \$0 10
Wrought Steel	.....per gro. 4 50

TACKS.

Bill Posters' 6-oz. 25-lb. boxes	
per lb	.....15c
Upholsterers' 6-oz., 25-lb.	
boxes, per lb	.....15 1/2 c

TAPES, MEASURING.

Asses' SkinList & 40%
-------------	-----------------

THERMOMETERS.

Tin Case	.....per doz. 80c & \$1 25
Wood Backs	....." 2 00 & 12 00
Glass	....." 12 00

TIES.

Bale.	
Single Loop, carload	
lots	.....75 & 7%
Single Loop, less than	
car lots	.....70 & 15%

TRAPS.

Mouse and Rat.	Per Gross
Sure Catch Mouse Traps	\$ 2 10
Vim Mouse Traps	2 10
Short Stop Mouse Traps	1 80
Wood Choker Mouse	
Traps, 4 hole	10 25

Sure Catch Rat Traps	Per Doz. \$0 90
Dead Easy Rat Traps	1 00
Packed in One Bushel Band Stave	
Baskets.	List per Bushel

Sure Catch Mouse Traps	(360 Traps) \$ 5 25
Short Stop Mouse Traps	(360 Traps) 4 50
Sure Catch Rat Traps	(54 Traps) 3 60
Short Stop Rat Traps	(54 Traps) 3 15

Assorted Mouse and Rat Traps.	List per Bushel.
Sure Catch (216 Mouse	
Traps and 26 Rat Traps)	\$4 90
Short Stop (216 Mouse	
Traps and 26 Rat Traps)	4 25

TROWELS.

Cement.	
Atkins No. 6	.....\$19 50
No. 9	.....25 50

TWINE.

White Cotton.	
Eureka, 4-ply	.....per lb. 30c
Jute.	
3-ply and 6-ply Bale Lots	22 1/2 c

VALLEY.

Milcor	.....60%
Galv. formed or roll	.....60%

VENTILATORS.

Standard30 to 40%
----------	----------------

VICES.

No. 700 Hand.	
Inches	4 1/2 5 5 1/2
Doz.	\$11 15 13 00 14 85
No. 701.	In. 4 5 6
Doz.	\$11 15 12 00 16 70
No. 1. Genuine Wentworth.	
Noiseless Saw	.....per doz. 9 25
No. 3. Genuine Wentworth.	
Noiseless Saw	.....per doz. 12 75
No. 500. All Steel Folding	
Saw	.....per doz. 16 00

WASHERS.

Over 1/2 in. barrel lots	
per 100 lbs.	.....\$6 25
Iron and Steel.	
In. 5/16	3/4 1 1/4 1 3/4 2
10 1/2 c 9 1/2 c 7 1/2 c 7 1/2 c	7 2 1/2 c

WEATHER STRIPS.

Metallic Stitched.	
1/2 in., per 100 ft.	.....\$1 80
3/4 in., per 100 ft.	.....2 20
Wood and Felt.	
1/2 in., per 100 ft.	.....\$1 56
3/4 in., per 100 ft.	.....1 56

WEIGHTS.

Hitching	.....per lb. Nets
Sash—f. o. b. Chicago	
Smaller lots, per ton	.....\$47 50

WHEEL BARROWS.

Common Wood Tray	.....\$3 75
Steel Tray, Competition	.....4 50
Steel leg, garden	.....5 00

WIRE.

Plain annealed wire, No. 8	
per 100 lbs.	.....\$3 70
Galvanized barb wire, per	
100 lbs.	.....4 10
Wire cloth—Black painted,	
12-mesh, per 100 sq. ft.	2 35
Cattle Wire—galvanized	
catch weight spool, per	
100 lbs.	.....4 60
Galvanized Hog Wire, 80 rod	
spool, per spool	3 98
Galvanized plain wire, No. 9,	
per 100 lbs.	4 15
Stove Pipe, per stone	1 10

WOOD FACES.

50% off list.

WRENCHES.

Coes Steel Handle, 6-in.	40-10%
" " " 8-in.	40-10%
" " " 10-in.	40-10%
" " " 12-in.	40-10%
Coes Knife-Handle, 6-in.	40-10%
" " " 8-in.	40-10%
" " " 10-in.	40-10%
" " " 12-in.	40-10%
Coes All Patterns	.....40-10%

WRINGERS.

No. 790. Guarantee per doz.	\$49 50
No. 770. Bicycle	47 00
No. 670. Domestic	48 50
No. 110. Brighton	39 00
No. 750. Guarantee	51 00
No. 740. Bicycle	48 50
No. 22. Pioneer	35 50
No. 2. Superb	25 50

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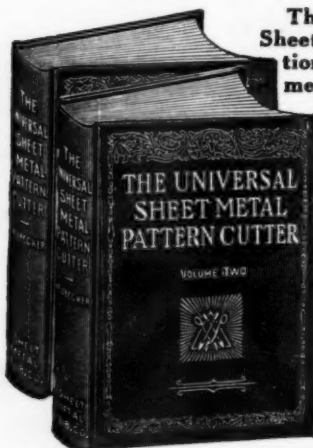
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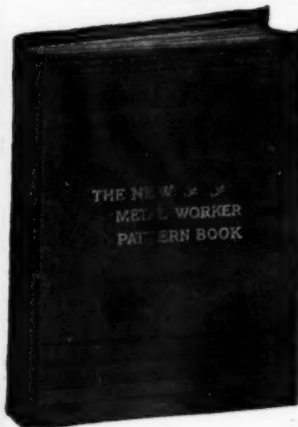


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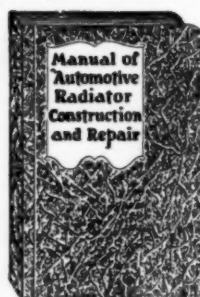
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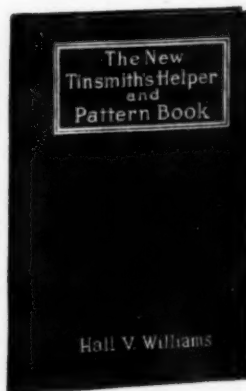
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